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Does Age Affect the Stress and Coping Process? Implications of Age Differences in Perceived Control

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The perceived controllability of situations is thought to influence the types of coping strategies used, and thus is important in adaptive processes. Elderly individuals are widely perceived to have less control over their environment than other adults. This lack of perceived control should have adverse effects on how they cope with stressful situations. However, most studies have shown that older adults differ little from younger adults in their approaches to coping with stress. This contradiction was investigated in a sample of 228 community-residing adults with a mean age of 42.16 (SD = 14.88). Path analysis revealed that appraisals and attributions do affect the use of coping strategies such as instrumental action and escapism in the expected directions, and age is negatively associated with perceived control. However, there was an independent and negative relationship between age and the reported use of escapist coping strategies, which mitigated the adverse effects of perceived lack of control. Neither age nor perceived controllability had direct effects on depression, but they had indirect effects through their influence on the use of coping strategies and perceived efficacy.

THE construct of control is important to several fields of study, including aging, attribution, and health psychology (see Baltes & Baltes, 1986). In the attribution literature, perceptions of control, whether internal or external, are thought to be central to many processes, including achievement and depression (e.g., Lefcourt, 1976; Rotter, 1966; Seligman, 1975). A sense of control may be particularly important to well-being and even longevity in the elderly (Langer & Rodin, 1976; Rodin & Langer, 1977). The elderly, however, are widely assumed to be deficient in a sense of control, due to physical and environmental limitations (cf., Rodin, 1986). Since appraisals of control or "manageability" are thought to influence how individuals cope with problems (Folkman, 1984), older individuals should cope with problems in a more passive way and be less likely to try to master situations (e.g., Gutmann, 1974). However, as we shall see, the coping literature does not appear to sustain this hypothesis.

The purpose of this study was to address this apparent contradiction in the literature. If there are age-related trends in the perception of control, and if control is a central component of the appraisal process which guides how individuals cope with problems, why then do older individuals appear to cope in much the same way as younger ones do?

Age and control. — Lachman (1986) recently reviewed the literature on age-related trends in the perception of control. Early studies of age differences in locus of control often found that the elderly tended to be more external than younger adults, but later studies have often shown mixed results. Lachman suggested that, while general control expectancies may show little relation to age, specific dimensions of control do seem to be lower in the elderly. To quote, "Age differences were found most often on the chance and powerful others control dimension, suggesting that the elderly acknowledge the importance of external sources of control" (p. 34).

Stress and coping studies appear to support this observation. For example, Blanchard-Fields and Robinson (1987) found no age differences in generalized locus of control, but did find differences with the domains of interpersonal relationships and achievement. In particular, the elderly were less likely to attribute controllability for the cause or outcomes of stressful events to themselves in these domains. Similarly, Folkman, Lazarus, Pimley, and Novacek (1987) showed that the elderly were less likely to appraise their stressful encounters as changeable than were younger groups.

Age and coping strategies — Theoretical considerations. — Depending upon how the term "age" is defined, the effects of age on coping strategies can be roughly divided into three categories. First, if aging is understood in terms of biological aging, then age may have an indirect effect on coping strategies through the increase in health problems associated with aging. As one ages, there are changes in types of problems experienced (cf., Aldwin, 1990). The elderly are more likely to be coping with both their own health problems and those of significant others, especially spouses. They are also more likely to be bereaved or suffer the loss of close friends and relatives than are younger adults.

As Folkman and Lazarus (1980, 1985) have pointed out, both health and loss problems are more likely to evoke palliative or emotion-focused coping than instrumental action. McCrae (1982) suggested that differences in coping strategies among younger and older adults are primarily a function of differences in the types of problems that they face. Therefore, any study of aging and coping strategies needs to determine whether or not the older respondents are coping with health problems.

Second, age effects can also be understood in terms of cohort differences. There may be historical characteristics of the present population of older adults that affect their choice of coping strategies. While the coping strategies of different

age groups have been contrasted (cf., Aldwin & Revenson, 1985; Felton & Revenson, 1987; Folkman et al., 1987; McCrae, 1982, 1989), the precise historical trends that might account for these cohort differences have not been systematically examined in the literature. For example, one could hypothesize that the lower levels of education in the present aged cohort, compared to younger groups, may predispose them to less active forms of mastery, given the positive association between education and internal locus of control (Lefcourt, 1976).

Third, age can also be understood in terms of intrinsic developmental processes. Gutmann (1974) suggested that a shift in mastery styles occurs across the life span, with young adults choosing strategies reflecting active mastery, middle-aged adults using what he termed "passive" mastery techniques, and old adults using "magical mastery." Using TAT cards, Gutmann attempted to show that this decremental developmental shift occurred cross-culturally. However, responses on TATs do not necessarily reflect the actual use of coping strategies in everyday problems, and alternative explanations are possible, including age differences in education and socialization to Western norms.

In contrast, Vaillant (1977) suggested that an incremental developmental process occurs across the life span, characterized by a shift from neurotic or immature defensive styles in early adulthood to more mature defensive styles among the middle-aged. Immature adaptive mechanisms are characterized by fantasy, projection, hypochondriasis, passive-aggressive behavior, and acting out, while neurotic mechanisms are characterized by intellectualization, repression, reaction formation, and displacement. Mature mechanisms, on the other hand, are characterized by the more positive sublimation, altruism, anticipation, and humor. Using longitudinal, open-ended data from a sample of high-functioning men, Vaillant attempted to demonstrate that, as people age, most (but not all) become more adaptive rather than less.

Despite the attractiveness of Vaillant's hypothesis, there are several limitations to it. At the time of the study, the sample had only reached middle-age, and it is not clear whether these incremental increases in adaptation continue in late life. In addition, by focusing on unconscious mechanisms directed toward the emotions, particularly anxiety, he neglected the whole area of problem-focused coping strategies, and whether or not developmental changes occur in the use of these strategies. This focus on unconscious mechanisms makes it difficult to determine the process by which such developmental changes occur.

These intrinsic developmental processes may be better understood in terms of *experience*. As people age, they are exposed to a greater variety of problems, and hopefully through this process they have learned which types of coping strategies are generally ineffective, and which types can achieve their goals in various situations. Some individuals may develop self-limiting life styles through which they manage to avoid many problems by severely restricting their range of activities, or they may cling to ineffective means of coping with problems (Lowenthal, Thurnher, & Chiriboga, 1975). But, in general, through experience, people may increase their coping repertoires and become more able to successfully cope with difficulties.

Age and coping strategies — Empirical findings. — If older adults are less likely to perceive stressful episodes as controllable, they should also be less likely to use instrumental action and more likely to use palliative or avoidant coping strategies. However, nearly every study of aging and coping has found that, in general, older individuals are not passive copers. For example, the Vaillant (1977) study mentioned earlier found that middle-aged men in the Grant study used fewer neurotic and immature defense mechanisms and more mature strategies, in contrast with their youthful selves. Similarly, McCrae (1982) found that older adults used fewer escapist and hostile strategies.

Studies using a standardized assessment of coping, the Ways of Coping Scale (Folkman & Lazarus, 1980, 1985), have generally confirmed these findings. Several studies have found that older adults used less escapism or avoidant coping, but used similar levels of problem-focused coping (Aldwin & Revenson, 1985; Felton & Revenson, 1987; Irion & Blanchard-Fields, 1987). The exception to this general trend was a study by Folkman et al. (1987), which found that older people used less planful problem solving and more escape avoidance. However, Folkman and her colleagues examined the *relative* use of those coping strategies, or ratio of the strategy to the overall number of strategies used (cf., Vitaliano, Maluro, Russo, & Becker, 1987). Only then did age differences emerge on the coping strategies.

Present Study

The purpose of this study is to investigate these two conflicting sets of findings. First, older adults tend to report less perceived control over events; therefore, their coping strategies should reflect more avoidant and less problem-focused coping. However, with one exception, most studies of coping and aging report that older adults use fewer avoidant coping strategies and the same amount of problem-focused coping as younger adults. The present study will first model the relationships between perceived control, coping strategies, and mental health, using path analysis, and then examine the effects of age and health-related stress on that model.

METHOD

Sample and Procedure

The sample was originally drawn through a computer-generated, random-digit dialing system designed to contact adults age 18 or older residing in the Los Angeles-Long Beach Standard Metropolitan Statistical Survey Area (Catalano & Dooley, 1983). From this original telephone survey, attempts were made to contact 914 individuals by telephone to solicit participation in this further study and obtain addresses. Of these, 170 (18.6%) could not be reached and 124 (13.6%) declined participation. Questionnaires were mailed to 620 potential respondents. Reminder postcards were sent two weeks later. Answer sheets were returned by 308 individuals, 34% of the original respondents and 50% of those mailed questionnaires (see Aldwin & Revenson, 1987).

The present sample includes only those 228 people who had no missing data on any of the nine measures in the study. The sample was 61% female, and the age ranged from 18 to 78, with a mean age of 42.16 ($SD = 14.88$). The educa-

tional mode of the sample was some college; 84% were White, nearly half (47%) were married, and 46.3% were Protestant. Half of the sample was employed full time, 12% were homemakers, and 9% each were retired or unemployed. Compared to the individuals not in the study, the present sample was younger (42 vs 55, $t(297) = 6.16, p < .001$) and better educated, $t(300) = -2.29, p < .05$. However, there were no differences between the groups in sex, ethnicity, or income level.

Measures

Coping was measured using a slightly modified form of Folkman and Lazarus' (1985) Ways of Coping Scale (WOCS). Briefly, the WOCS was modified by: slightly rewording three items to reflect coping processes rather than outcomes ("Tried to rediscover what is important in life" vs "Rediscovered what is important in life"; splitting one item into two items; and deleting the "other" item because it could not be used in a factor analysis. (See Aldwin & Revenson, 1987, for a description of those modifications.)

The WOCS asks respondents about the most stressful episode that occurred in the past month. These open-ended responses were content-analyzed to identify problems involving health versus other types of problems (e.g., relational, transportation, routine maintenance, etc.).

Individuals rated how stressful they found the situation on a scale ranging from 1 to 7 ($M = 4.39, SD = 1.56$). Respondents were then asked to indicate which of 70 possible coping items they had used by rating each item on a 4-point scale, with 1 indicating that the respondent had not used the strategy, and 4 indicating that it had been used often.

Previous analyses on these data showed that the WOCS yields eight factors (Aldwin & Revenson, 1987), which were similar to those found by Folkman, Lazarus, Dunkel-Schetter, Gruen, & DeLongis (1986). This study focuses on two coping strategies, instrumental action and escapism, since these appear to be the most central to studies of aging and coping strategies (see above). The instrumental action subscale contains seven items assessing strategies such as "I made a plan of action and followed it" and "I knew what had to be done, so I doubled my efforts to make things work." As such, it appears to assess primarily problem-focused coping. The escapism subscale contains seven items assessing strategies such as "Had fantasies or wishes about how things might turn out" and "I daydreamed or imagined a better time or place than the one I was in." These items reflect primarily emotion-focused coping. Both subscales had acceptable internal reliabilities ($\alpha = .75$ and $.78$, respectively). (See Aldwin & Revenson, 1987, for a complete listing of the items on these subscales.)

For this study, these two subscales were scored by assessing the relative use of these strategies, e.g., dividing each strategy by the sum of the eight strategies and multiplying by 100 (Vitaliano et al., 1987). This was done to replicate as closely as possible the procedure used in the Folkman et al. (1987) study, which found age differences in the relative, but not absolute, use of these coping strategies.

The measure of control was based upon Brickman et al.'s (1982) model, in which they argued that locus of control in

stressful situations should be divided into responsibility for the occurrence of the event and responsibility for management of the event. Thus, an individual may feel that he or she was not responsible for the occurrence of the stressful event, but may nonetheless feel responsible for managing it, and vice versa. These two items were rated on a 1–5 scale, where 1 indicated not at all responsible, and 5 indicated extremely responsible.

A measure of the perceived efficacy of the overall coping effort was included. Respondents were asked to indicate on a 5-point scale how well they thought they had handled the situation "given the circumstances" (1 = Not well at all; 5 = Very well). An earlier study by Aldwin and Revenson (1987) showed perceived efficacy to be both predictive of psychological symptoms and capable of modifying the relationship between problem-focused strategies and mental health.

The outcome measure was depressive symptoms, using the CES-D (Radloff, 1977). This is a 20-item scale indicating severity of depressive symptoms over the past month. Each item is rated on a 4-point scale (1 = None; 4 = Most of the time).

Analyses

The analysis was divided into two phases. In the first phase, we modeled the relationship between appraisals of stress and attributions of responsibility, coping, efficacy, and depression, without regard to age or the type of problem being coped with. To do this we used the GEMINI program for analysis of structural equations developed by Wolfe & Ethington (1985). This program calculates β s and standard errors for both the direct paths and the indirect paths, e.g., the effect of X_1 on Y via X_2 , which is derived by multiplying the β s. By calculating the standard errors, it allows determination of which direct and indirect paths are significant.

The GEMINI program requires that the order of the variables entered into the model be specified. Since this is a cross-sectional, self-report study, the order that the variables are entered is somewhat arbitrary, but is based upon theoretical models in the literature.

In Lazarus' (1981) model, appraisal is primary to the stress and coping process, as it is the impetus to both further appraisals of controllability (secondary appraisal) and coping strategies. Thus, the first variable entered into the path model was the appraisal of stress, while the second and third variables entered were the attributions of responsibility for occurrence and management of the problem. Since both the appraisal of stress and attributions are hypothesized to affect the use of coping strategies, the third and fourth variables entered were the escapism and instrumental action. We then added into the model the perceived efficacy of the coping effort as the fifth variable, and ended with the outcome variable, depressive symptoms.

In path analysis, each variable can be a function of any of the preceding variables. Thus, depression could be the direct or indirect effect of efficacy, coping, attributions, or appraisals of stress, while perceived efficacy could be a function of coping, attributions, or appraisals of stress. The β for each path represents a partial correlation, controlling for the effects of all other preceding variables. For example, the

effect of efficacy on depression is a partial correlation, controlling for the independent effects of stress, appraisal, and coping on depression. Thus, a model with all possible paths was computed first, and then a second model with only the significant paths was computed.

This analysis focuses on two coping strategies, instrumental action and escapism, for several methodological and conceptual reasons. First, it simplified the model to include only two, as opposed to eight, coping strategies. Second, as reviewed above, these particular strategies appear to be most central to the controversy over age differences in coping. Third, they were the coping strategies that related most strongly to depression in this sample. Therefore, age differences in these strategies would be most consequential for adaptational outcomes.

In the second phase of the analysis, we entered two additional variables into the model, age and whether or not the respondent was coping with a health problem. These were entered in the first and second steps, respectively, as antecedents to the rest of the model. In our sample, 45% of the respondents over 65 were coping with health problems, either their own or that of others. Since health problems are expected to lead to increased use of escapism and decreased instrumental action (e.g., Folkman & Lazarus, 1980), we elected to use a dichotomous variable indicating whether or not the respondent was coping with a health problem to control for that potential confound with age.

RESULTS

Bivariate Analyses

Table 1 presents the zero-order correlations among the other variables used in this study, as well as the means and standard deviations for all variables. As expected, age was significantly and positively related ($r = .24, p < .001$) to the reporting of a health problem as the most stressful episode in the past month. Age was negatively related to both the perceived stress ($r = -.14, p < .05$) and the attributions of responsibility for both the occurrence and management of the problem ($r = -.29$ and $-.25$, respectively, $p < .001$). However, there was no association between age and instrumental action, but a negative correlation with escapism ($r = -.02$, n.s., and $-.17, p < .01$, respectively). Finally, age was not related to coping efficacy ($r = .02$, n.s.), but it was

negatively related to depression ($r = -.18, p < .01$), which was similar to the magnitude of the relation between age and depression in a community survey by Feinson and Thoits (1986).

People who reported a health problem as the coping stimulus were slightly less likely to attribute responsibility for the occurrence and management of the problem to themselves ($r = -.13, p < .05$ and $r = -.17, p < .01$, respectively). While this apparently was unrelated to their relative use of escapism and instrumental action, they were slightly more likely to perceive their coping efforts as efficacious ($r = .18, p < .01$).

Interestingly, the appraisals of stress and attributions of responsibility were independent, although both were correlated with the relative use of coping strategies. Stress ratings were positively associated with escapism ($r = .23, p < .001$) and negatively associated with instrumental action ($r = -.19, p < .01$). Instrumental action was associated with perceived responsibility for both occurrence and management of the problem ($r = .16, p < .01$, and $r = .35, p < .001$, respectively). Escapism was weakly and negatively correlated with responsibility for management ($r = -.13, p < .05$).

Finally, both efficacy and depression were associated with the stress and coping variables in the expected directions, although they were independent of the attributions of responsibility.

These correlations demonstrate that age is clearly relevant to seven of the eight variables in the model, and thus can be seen as having an important impact on the stress and coping process. Further, the correlations confirm both of the contradictory findings in the literature. On the one hand, there is less perceived control and responsibility with age, but, on the other, the elderly are less likely to use escapism but equally likely to use instrumental action. Despite the lack of perceived responsibility, there were no age effects in perceived efficacy of the coping effort, and less depression with age.

Multivariate Analyses

Figure 1 presents the results from the first path analysis, examining the relations among appraisals, attributions, coping, perceived efficacy, and depressive symptoms. All β s reported here are significant beyond the .05 level. Remem-

Table 1. Zero-order Correlations of the Variables in the Study

	2	3	4	5	6	7	8	9
1. Age	.24***	-.14*	-.29***	-.25***	-.17**	-.02	.02	-.18**
2. Health Problem		-.02	-.13*	-.17**	.06	-.05	.18**	-.09
3. Stress Rating			.01	.01	.23***	-.19**	-.16**	.46***
4. Responsibility for Occurrence				.47***	.07	.16*	.00	.04
5. Responsibility for Management					-.13*	.35***	.11	-.09
6. Escapism						-.32***	-.29***	.47***
7. Instrumental Action							.36***	-.38***
8. Perceived Efficacy								-.34***
9. Depressive Symptoms								
Mean	42.16	4.39	3.51	3.55	10.79	14.27	3.59	32.01
SD	14.18	1.58	1.62	1.57	3.21	3.47	1.08	9.84

* $p < .05$; ** $p < .01$; *** $p < .001$.

ber that the reported β s represent partial correlations, controlling for all preceding variables in the model.

Both appraisals of stress and attributions of responsibility directly affected how individuals coped with their problems. With greater stress, individuals used less instrumental action ($\beta = -.14$) and more escapism ($\beta = .23$). Individuals who perceived that they were responsible for the occurrence of the stressful episode were slightly more likely to use escapism ($\beta = .17$), while taking responsibility for the management of the problem led to greater use of instrumental action ($\beta = .32$).

In turn, the relative use of the coping strategies affected both perceived efficacy and depression. Escapism was associated with lower efficacy ($\beta = -.19$) and higher levels of depressive symptoms ($\beta = .30$), while instrumental action was associated with increased efficacy ($\beta = .30$) and fewer depressive symptoms ($\beta = -.17$). Note, however, that while stress has a direct effect on depression ($\beta = .34$), the attributions had no direct effects.

In other words, the path analysis supports both Lazarus' (1981) stress and coping model and attribution theory models (Brickman et al., 1982). Appraisal of stress and attributions influence the use of coping strategies. In turn, coping strategies directly affect both how the individual felt he or she handled the problem and depressive symptoms resulting from the problem. The relationships between attributions and depression were indirect, that is, attributions affected coping strategies which in turn were related to depression.

Interestingly, perceived responsibility for occurrence led to perceived responsibility for management and thus indirectly to increased instrumental action, but perceived responsibility for occurrence could also lead to escapism. This suggests that people may not be internally consistent in their relations between attributions and behavior.

In the next step, two variables, age and whether the individuals were coping with health problems, were added to path analysis as the first and second variables entered, respectively. The total variance accounted for in this model was 42%, $F(8, 291) = 19.76, p < .001$.

Interestingly, adding age and whether the respondents were coping with health problems to the model had little

effect on the basic pathways between appraisal, attributions, coping, and outcomes. All of the paths remained significant, although the β s shifted slightly (see Figure 2).

Nevertheless, age and health problems were related to the other variables in the models, and thus the process of adapting to stress. Age was significantly and positively associated with having to cope with health problems ($\beta = .24$), but negatively associated with perceived stress ($\beta = -.14$). Even controlling for health problems and stress level, age was negatively related to both attributions of responsibility. In other words, the older adults were disclaiming responsibility for the occurrence of their problems, and, to a lesser extent, for the management of their problems. According to the model, this should affect their coping behavior and lead to poorer outcomes. But, examining the effects of age on coping strategy use, there is an independent and negative effect of age on escapism ($\beta = -.16$), and no independent effects on instrumental action. In other words, although older individuals attributed less responsibility to themselves, they report coping in ways inconsistent with their attributions. They report less use of escapism than younger adults, and report using similar levels of instrumental action to younger adults.

Note that there was no effect of health problems on attributions of responsibility, or on the use of coping strategies. Further, coping with health problems was associated with increased efficacy. Health problems were apparently something that these community-residing adults felt that they could handle, and handle reasonably well.

Table 2 presents the total effects of age on the variables in this study. Total effects are computed by summing the direct and indirect effects. (Significance is shown for the indirect effects only.) Age had no direct effects on either efficacy or depression, but there were significant indirect effects on these variables. For example, health problems were associated with increased efficacy, as was less frequent use of escapism. Because the elderly were more likely to be coping with a health problem, and were less likely to use escapism, there was an indirect and positive effect on efficacy. Similarly, the elderly had lower depression scores because they used less escapism, had lower perceived stress, and were coping with health problems, which they thought they could

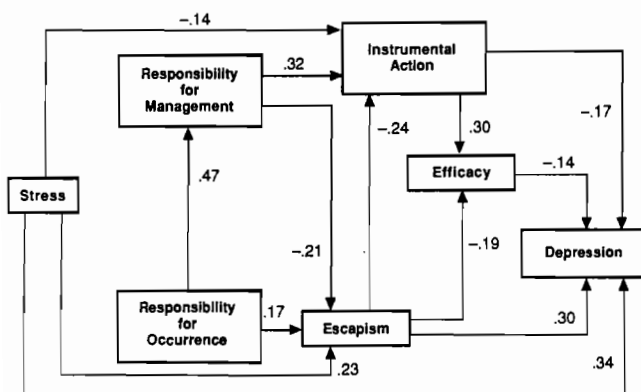


Figure 1: Results of path analysis demonstrating general relations among appraisal, attributions, coping, efficacy, and depressive symptoms.

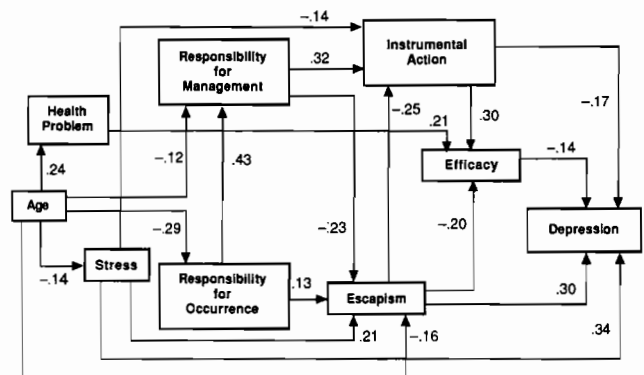


Figure 2: Impact of age and coping with health problems on the general model.

Table 2. Total Effects of Age

Dependent Variable	Direct Effects	Indirect Effects	Total Effects
Health Problem	.006		.006
Stress	-.015	.000	-.015
Responsibility for Occurrence	-.032	.000	-.032
Responsibility for Management	-.013	-.013***	-.026
Escapism	-.035	-.002	-.037
Instrumental Action	.000	-.004	-.004
Efficacy	.000	.006**	.006
Depression	.000	-.070**	-.070

** $p < .01$; *** $p < .001$.

handle. Thus, the zero order correlation of $-.18$ between age and depression can be explained by appraisal and coping processes, as well as by the types of stresses faced.

DISCUSSION

The results of the path models clearly support a general stress and coping model. Both the appraisal of stress and attributions of responsibility independently affected the use of coping strategies in stressful situations in the expected directions. Individuals who reported feeling less responsibility were less likely to report the use of instrumental action and more likely to report using escapism. In turn, the relative use of instrumental action and escapism affected both perceived efficacy and depressive symptoms. Together, these variables accounted for 42% of the variance in depressive symptoms.

It is noteworthy that attributions of control had no direct effects on either perceived efficacy or depressive symptoms. Attributions of control affected only how individuals coped with problems, which in turn were related to outcomes. If, in fact, reports of coping strategies accurately reflect behavior, perceived control may affect mental health primarily by influencing individual action in stressful situations, and interventions in coping skill training may enhance feelings of individual control (cf., Cameron & Meichenbaum, 1982).

Adding age and whether the individuals were coping with health problems did not change the basic relations among stress, appraisals, attributions, and coping. Nevertheless, age was clearly an important factor in the stress and coping process. Age correlated with seven of the eight other variables in the model. Path analysis showed that it had direct effects on the type of problem being coped with, stress appraisals, attribution, and the use of escapism as a coping strategy. Age had only indirect effects on perceived efficacy and depression. Indeed, all of the association between age and depression was indirect, mediated through appraisal and coping processes.

But if older adults were less likely to feel responsible for the management and solution of their problems, and, by implication, felt less control, why did this not have adverse affects on their coping processes? While appraisal does appear to trigger coping processes, and attributions shape the relative use of coping strategies, age had an independent effect on the use of coping strategies. In other words, coping is affected not only by cognitive processes such as appraisal

and attributions, but also by personal characteristics such as experience, assuming that age is a proxy for experience. As such, coping cognitions and behaviors are influenced by multiple factors, not just appraisal. Experience, in this instance, eclipsed the more general relations among appraisals, attributions, and coping. Older individuals were less likely to report the use of escapist strategies that long experience may have shown them are ineffective techniques for coping with stress.

In addition, coping with health problems was apparently a source of efficacy for these older individuals. Having to cope with a problem that was, perhaps, all too familiar, was nonetheless a source of a sense of mastery for older individuals in this sample. Health problems may not be perceived as controllable, but nonetheless they may be manageable, and the process of managing the problem may give rise to feelings of efficacy.

A number of caveats need to be mentioned. This sample cannot be considered representative. It does not include elderly who were institutionalized, and respondents were self-selected from among those with sufficient capacity to complete a lengthy questionnaire. It is probable that this model does not apply to severely incapacitated older adults, and those who did not feel effective in coping with health problems may not have responded. If it is true that this sample is better-functioning than the norm, it is interesting that, nonetheless, clear age trends were seen. However, this study was also cross-sectional, and could not control for cohort effects. Thus, these results need to be replicated in other samples using longitudinal data.

In addition, these results were based exclusively on the use of self-report instruments, and some other underlying factor may have biased these results. For example, older adults may simply be more reluctant to report the use of escapist coping strategies, and more direct, observational studies may be needed to verify the presumption that older adults actually use fewer escapist strategies.

Further, the ordering of variables in the model was somewhat arbitrary. As Lazarus (1981) pointed out, coping can affect appraisal, and it may be that coping can affect attributions of control as well. For example, if initial coping efforts fail, one might modify attributions of responsibility for managing the event. Thus, the model presented here is, at best, a simplified representation of the stress and coping process. Nonetheless, it provides some insight into the interrelationships among key variables of interest in detailing the relationships among aging, control, and mental health. The observation that coping cognitions and behaviors are influenced by multiple factors may help explain the discrepancies between the aging and control literature, on the one hand, and the aging and coping literature, on the other.

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