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Self-Perceived Problem-Solving Ability, Stress Appraisal, and Coping over Time

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This study examined the effects of self-perceived problem-solving ability on the stress and coping processes as theorized by Lazarus and Folkman (1984). Using a prospective design, 141 undergraduates completed questionnaires in 2-week intervals that measured recent stressful encounters, the cognitive appraisal of each particular event, and subsequent coping strategies. Self-perceived problem-solving ability was measured at Time 1. It was predicted that self-perceived effective problem solvers would consistently see less threat (primary appraisal), perceive more options for coping (secondary appraisal), and use more problem-focused and less emotion-focused coping strategies than self-perceived ineffective problem solvers. Results of separate 2 × 2 repeated-measures MANOVAs supported predictions regarding problem solving and coping, but not those regarding cognitive appraisal. These findings are discussed in regard to theoretical notions of self-perceived problem-solving ability and transactional models of stress appraisal and coping. © 1992 Academic Press, Inc.

The perception of one's problem-solving ability has emerged as an important individual difference variable (Heppner, 1988). Problem-solving skills include the ability to search for information, analyze situations for the purpose of identifying the problem in order to generate alternative courses of action, weigh alternative courses of action with respect to desired or anticipated outcomes, and select and implement an appropriate plan of action (Janis & Mann, 1977). Heppner and Krauskopf (1987) theorize that self-perceived problem-solving ability serves a central function in the way a person perceives and experiences different aspects of dealing with problematic situations.

Unlike other cognitively based personality variables that pertain to general expectancies for good outcomes (optimism; Scheier & Carver,

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1987) or the nature of reinforcement (locus of control; Rotter, 1966), self-perceived problem-solving ability is the individual's global assessment of specific skills in solving problems encountered in daily life (Heppner, 1988). Empirical research of self-perceived problem solving has often utilized the Problem Solving Inventory (PSI; Heppner, 1988), a measure assessing the attitudes and behaviors across the stages of problem solving delineated by D'Zurilla and Goldfried (1971). The three distinct constructs theoretically important in problem solving (and measured by the PSI) include the general tendency to systematically approach problems, generate solutions, and evaluate outcomes ("approach-avoidance"); the degree of trust and belief in one's ability to successfully solve problems ("problem-solving confidence"); and the appraisal of one's ability to exercise emotional and behavioral control while problem solving ("personal control").

Research has found theoretically consistent differences between self-perceived effective and ineffective problem solvers on a variety of cognitive dimensions. In comparison to self-perceived ineffective problem solvers, effective problem solvers have more internal expectancies for control (Nezu, 1985), make fewer attributions of self-blame (Baumgardner, Heppner, & Arkin, 1986), and have more positive self-concepts and fewer irrational thoughts (Heppner, Reeder, & Larson, 1983). Heppner et al. (1983) also found that self-perceived effective problem solvers enjoyed thinking and other cognitive activities—as measured by the Need for Cognition scale (Caccioppo & Petty, 1982)—more than ineffective problem solvers. Self-perceived effective problem solving has also been significantly associated with more adaptive study habits and attitudes (Elliott, Godshall, Shrout, & Witty, 1990), greater confidence in decision-making ability (Larson & Heppner, 1985), and higher levels of hope and goal-directed energy (Snyder, Irving, & Anderson, 1991).

It is important to determine the discriminant validity of social cognitive indices of personality with measures of negative affectivity, since this latter construct is often embedded in many individual difference measures. Ideally, the PSI should demonstrate stronger associations with theoretically similar constructs (to establish convergent validity) than with dissimilar constructs (in establishing discriminant validity). Therefore, it is crucial to assess the associations between problem-solving appraisal and measures of negative affectivity. MacNair (1990) found PSI total scores were moderately correlated (.48) with neuroticism as measured by the NEO-PI (Costa & McCrae, 1985). Larson, Piersal, Imao, and Allen (1990), in two separate studies, found PSI scores significantly correlated with measures of positive coping strategies ($-.54$, $-.51$), problem-solving skills ($-.54$, $-.51$), self-concept ($-.54$, $-.55$), depression (.44, .25), and trait anxiety (.51, .46). Furthermore, in multiple-regression equations using simulta-

neous entry, positive coping strategies and problem-solving skills emerged as significant predictors of PSI in both studies. A composite negative affectivity index (incorporating the trait anxiety, depression, and self-concept scores) was not significantly predictive of PSI scores. All of the variables together accounted for 40 to 50% of the variance in PSI scores, affirming that the PSI stands as a unique individual difference construct.

Self-perceived ineffective problem solvers report more psychological distress than self-perceived effective problem solvers (Heppner & Anderson, 1985, Nezu, 1986a). Other studies have revealed that self-perceived effective problem solvers are better able to cope with the problems or difficulties inherent in negative life stress and exhibit less depression and anxiety under conditions of high stress (Elliott, Godshall, Herrick, Witty, & Spruell, 1991; Nezu, Nezu, Saraydarian, Kalmar, & Ronan, 1986; Nezu & Ronan, 1988). Problem-solving appraisal has also been correlated with observer and self-reported ratings of interpersonal competence (Elliott et al., 1991; Heppner, Hibel, Neal, Weinstein, & Rabinowitz, 1982).

Unfortunately, it is difficult to understand the actual mechanisms by which problem solving is related to adjustment under stressful situations. It is probable that such pronounced differences in problem-solving styles could affect the cognitive appraisal of a stressful event that, in turn, influences behavioral responses (Lazarus, 1966). According to Lazarus' stress and coping theory (Folkman & Lazarus, 1980, 1985; Lazarus, 1966, 1981; Lazarus, Coyne, & Folkman, 1982; Lazarus & Folkman, 1984), coping is determined by the degree to which a person perceives threat in a particular situation ("primary appraisal"), and the subjective perception of personal resources, coping strategies, and social resources that may be used to deal with the situation effectively ("secondary appraisal").

The two functions of coping, according to Folkman (1984), are to regulate stressful emotions (emotion-focused coping) and to alter the troubled person–environment relationship causing the distress (problem-focused coping). Folkman and Lazarus (1980, 1985) have shown that both forms of coping are used in most stressful interactions and that the relative proportions of each form vary according to how the encounter is appraised. Folkman, Lazarus, Dunkel-Schetter, DeLongis, and Gruen (1986a) found that participants used more problem-focused forms of coping in encounters they appraised as changeable, and more emotion-focused forms of coping in situations they viewed as unchangeable.

If self-perceived problem-solving ability is related to how one processes information as Heppner and Krauskopf (1987) propose, then problem-solving appraisal may be associated with the appraisal of stress and coping options. Self-perceived effective problem solvers may appraise a problematic situation as manageable and challenging, whereas self-perceived

ineffective problem solvers would appraise the problematic situation as threatening and unchangeable (primary appraisal). Similarly, self-perceived ineffective problem solvers may appraise a stressful situation and conclude that few available coping options exist, whereas those perceiving themselves as effective problem solvers may decide many personal coping resources are available (secondary appraisal).

Furthermore, self-perceived effective problem solvers appear to be more inclined to use problem-focused coping strategies. Previous research has found significant associations between PSI scores and problem-focused coping (Heppner et al., 1983) and active coping strategies (Larson et al., 1990). However, these single correlations inadequately test the problem-solving appraisal–coping relationship because they do not examine the possible effects of consistent trait influences on appraisal and coping processes. In order to clarify the issue, more stringent studies of Lazarus' model of stress need to examine stress appraisals and coping with different events across time.

The prospective study of self-perceived problem solving on stress appraisal and coping would have several theoretical implications. First, the examination of appraisal and coping preferences in reaction to perceived stressors over time could provide evidence that self-perceived effective problem solvers consistently utilize different coping strategies than self-perceived ineffective problem solvers. Second, demonstrated effects of self-perceived problem solving on coping over time would indicate that individual differences influence the model of stress and coping as defined by Lazarus. Current criticisms of Lazarus' transactional model of stress and coping argue that enduring traits may influence the appraisal and coping process, given the theoretical implications of variables such as problem-solving appraisal on psychological adjustment (Lazarus, 1990; McCrae & Costa, 1984, 1986). Costa and McCrae (1990) argue that residual problems in Lazarus' system of research reflect his "long-standing reluctance to take the final step and acknowledge the importance of personality traits" (p. 22).

The present study examined the relation between self-perceived problem-solving ability, cognitive appraisals of stressful events, and coping strategies. According to the transactional perspective, coping should be determined situationally and in congruence with the person–situation transaction. We predicted that the appraisal and coping process would be influenced by one's problem-solving self-perception: Those with self-perceived effective problem-solving skills would see less threat, perceive more personal coping resources, and use more problem-focused coping and less emotion-focused coping strategies than those perceiving their problem-solving skills as ineffective. In order to demonstrate a meaningful main effect for self-perceived problem-solving, the influence of problem-solving

appraisal must be significant across several measurements of stressful events.

METHOD

Research participants. Participants for the study were 141 (100 female, 41 male) students enrolled in undergraduate courses offered by a Psychology department of an urban state university. The mean age of the sample was 23.03 (*SD* = 5.99; range 17 to 49 years). Students received undergraduate course credit for participating in a study of "personality and stress." All participants gave informed consent.

Procedure. Each participant in the study completed an informed consent form, the PSI, and the measures of stress appraisal and coping. These instruments were randomly ordered and distributed to students in several psychology undergraduate courses. Packets were given and returned to the researchers within the week.

Subsequently, at exactly 2 weeks and 4 weeks after the first assessment, participants received the second and third administration of the stress appraisal and coping measures. The PSI was administered once, and the stress appraisal and coping measures were collected three times.

Instruments. The PSI (Heppner, 1988) was used to access self-appraised problem-solving ability. The PSI contains 32 items which are rated on a 6-point scale (1 = strongly agree to 6 = strongly disagree). Lower scores indicate more positive perceptions of problem-solving ability. The PSI contains three factors: problem-solving confidence (e.g., "when confronted with a problem, I am unsure of whether I can handle the situation;" "I am usually able to think up creative and effective alternatives to solve a problem"), approach-avoidance (e.g., "I have a systematic method for comparing alternatives and making decisions;" "when making a decision, I weigh the consequences of each alternative and compare them against each other"), and personal control (e.g., "sometimes I get so charged up emotionally that I am unable to consider many ways of dealing with my problem;" "I make snap judgments and regret them later"). Separate scores are derived for these factors and a total score is computed by summing the factor scores. The total score is considered to be the best overall index of one's self-perceived problem-solving ability (Heppner, 1988).

Reliability estimates revealed that these constructs are internally consistent (alpha coefficients from .72 to .90; N = 150) and stable over a 2-week period (test–retest correlations from .83 to .89; N = 31; Heppner, 1988). Validity estimates have accumulated over several studies, revealing that the PSI total score and subscales are significantly related in predicted directions with a variety of self-report and observational measures (Heppner, 1988). The PSI has been found to be unrelated to intelligence within a meaningful range (correlations ranging from .03 to .11), supporting the discriminate validity for the measure (Heppner & Peterson, 1982).

Measures of stress appraisal and coping were taken from Lazarus and Folkman's programmatic research on stress and coping. Three important constructs vital to the Lazarus and Folkman (1984) transactional model of stress and coping are *primary appraisal, secondary appraisal,* and *coping strategies.* Primary appraisal was measured with 13 items that describe various threats people might perceive in a particular encounter. Respondents rate the extent each item applies to the unique stressor on a 5-point scale (1 = does not apply to me; 5 = applies a great deal to me). These items have been used frequently in transactional studies of stress and coping (Folkman, Lazarus, Gruen, & DeLongis, 1986b; Folkman et al., 1986a). Factor analysis has revealed one factor assessing threats to self-esteem (mean coefficient alpha of .78), and another assessing threats to a loved one's well-being (mean coefficient alpha of .76; Folkman et al., 1986a). Coefficient alphas for these factors across four administrations during a 6-month period averaged .69 and .61, respectively (Folkman, Lazarus,

Pimley, & Novacek, 1987). For the present study, ratings were summed to provide an overall score. Responses to the 13 items were summed for a total "primary appraisal" score. Acceptable reliabilities were observed at each of the three assessments for this total score in the present study (.71, .67, .74, respectively). Higher scores denote a greater perception of threat in a unique stressful encounter.

Secondary appraisal was measured with four items describing options important in determining coping strategies, consistent with the theoretical model (Lazarus & Folkman, 1984). Respondents indicated on a 5-point scale the extent to which the stressful situation was one (1) "that you could change or do something about," (2) "that you had to accept," (3) "in which you needed to know more before you could act," and (4) "in which you had to hold yourself back from doing what you wanted to do" (Folkman et al., 1986a). Responses were rated on a scale and respondents had an additional option to indicate "not applicable" to any of the items. Unacceptable reliabilities were observed for a total summed score across the three administrations (.15, −.06, .29, respectively); therefore, each item was treated as a separate dependent variable.

Validity coefficients for the measures of cognitive appraisal have not been provided by the originators of the scales. However, other research has found the measure of appraisal to be related to distress scores in predicted directions, supporting the construct validity of the scales (Vitaliano, Russo, Carr, Maurio, & Becker, 1985).

Coping was measured with a revised Ways of Coping questionnaire (Folkman et al., 1986a). This measure assesses the degree to which a respondent utilized cognitive and behavioral strategies to cope with a particular stressor, as rated on a 4-point scale for each item (0 = not used; 3 = used a great deal). The present study employed a version consistent with recommended psychometric revisions (Vitaliano et al., 1985). Scores were derived from eight items measuring strategies indicative of *problem-focused* coping (e.g., "I made a plan of action and followed it;" "I knew what had to be done so I doubled my efforts to make things work out"), and from seven items measuring *emotion-focused* coping (e.g., "Tried to make myself feel better by eating, drinking, smoking, using medication or drugs and so forth;" "I tried to keep my feelings to myself;" Folkman & Lazarus, 1985). Higher scores on each scale indicate the reported use of each strategy.

In terms of construct validity, both scales have been significantly related to measures of depression and anxiety in predicted directions. Concurrent validity has been indicated by significant relationships between coping scores and participation in group therapy (Vitaliano et al., 1985). An internal consistency coefficient for the problem-focused coping scale was .82 among medical students; coefficients for the emotion-focused scales ranged from .78 to .86 (Vitaliano et al., 1985). In the present study, acceptable reliabilities were observed across the three administrations for the measures of problem-focused coping (.70, .66, .69, respectively) and emotion-focused coping (.66, .58, .60, respectively).

The measures of primary appraisal, secondary appraisal, and coping strategies were combined in a single "Stress Questionnaire." Participants were instructed to pause and think of a stressful event they had encountered in the past 2 weeks. They were to write down the stressful event in the space provided, and then answer each question in the following sections concerning an aspect of the stressful event. The instructional set and format of the measures were taken from prior studies of the transactional theory of stress and coping (e.g., Folkman & Lazarus, 1986; Folkman & Lazarus, 1988; Folkman et al., 1986a).

Data analysis. To test the prediction that problem-solving appraisal would be associated with the primary and secondary appraisal of stressful events and the use of coping strategies over time, a 2 (Problem-Solving Appraisal) × 2 (Gender) repeated-measures MANOVA was computed. Scores on the primary appraisal and coping (problem-focused, emotion-focused) scales across the three administrations served as the dependent variables. Responses to the secondary appraisal items at each assessment were analyzed in a separate 2 × 2

TABLE 1
MEANS AND STANDARD DEVIATIONS ON STRESS APPRAISAL AND COPING VARIABLES BY GENDER AND SELF-PERCEIVED PROBLEM-SOLVING ABILITY ACROSS THREE ADMINISTRATIONS

	Effective problem solvers		Ineffective problem solvers	
	Men	Women	Men	Women
Time 1				
Primary appraisal	28.52	27.23	27.73	28.43
	(9.53)	(9.46)	(8.26)	(8.09)
Problem-focused coping	12.43	11.59	8.87	9.19
	(5.55)	(4.60)	(4.34)	(4.05)
Emotion-focused coping	5.24	6.15	7.47	7.77
	(4.18)	(4.42)	(4.03)	(3.78)
Time 2				
Primary appraisal	27.76	27.67	26.53	30.19
	(8.93)	(8.81)	(9.09)	(9.24)
Problem-focused coping	13.00	10.23	8.93	8.89
	(4.54)	(4.97)	(3.88)	(4.44)
Emotion-focused coping	4.00	6.08	5.80	6.96
	(2.79)	(3.98)	(3.49)	(3.71)
Time 3				
Primary appraisal	27.71	25.54	25.80	29.32
	(7.69)	(8.43)	(6.56)	(10.50)
Problem-focused coping	12.00	10.44	9.33	9.68
	(5.23)	(5.76)	(2.97)	(5.12)
Emotion-focused coping	5.67	5.46	6.20	7.19
	(4.35)	(3.47)	(3.86)	(4.29)

Note. Standard deviations are enclosed in parentheses.

repeated-measures MANOVA. Although past research has revealed no consistent differences between men and women on the PSI (Heppner, 1988), gender was included as a second independent variable to examine possible differences in stress appraisal and coping. To create two levels of perceived problem-solving ability (effective, ineffective), the sample was divided at the median score on the PSI.

RESULTS

The mean PSI score was 86.67 (SD = 19.21). Means and standard deviations for primary appraisal and the coping measures across the three administrations are contained in Table 1. Means and standard deviations for the four secondary appraisal items at each administration are displayed in Table 2. Participants with incomplete data were deleted from statistical analysis (N = 14); 5 participants who scored at the median on the PSI (Mdn = 89) were also deleted when the sample was divided to create

TABLE 2
MEANS AND STANDARD DEVIATIONS FOR THE SECONDARY APPRAISAL ITEMS AT THE THREE ADMINISTRATIONS

	Administration		
	1	2	3
Women			
Item 1	2.53	2.49	2.63
	(1.46)	(1.37)	(1.49)
Item 2	3.44	2.78	2.78
	(1.37)	(1.40)	(1.42)
Item 3	3.09	3.27	3.09
	(1.48)	(1.34)	(1.26)
Item 4	2.61	2.76	3.03
	(1.31)	(1.38)	(1.43)
Men			
Item 1	2.35	2.65	2.57
	(1.47)	(1.50)	(1.43)
Item 2	2.77	3.61	2.80
	(1.20)	(1.39)	(1.37)
Item 3	2.80	2.69	2.83
	(1.35)	(1.34)	(1.37)
Item 4	2.68	2.80	2.73
	(1.30)	(1.37)	(1.28)

Note. Standard deviations in parentheses. Respondents indicated the extent to which the stressful event was one: Item 1 = ". . .that you could change or do something about;" Item 2 = ". . .that you had to accept;" Item 3 = ". . .in which you needed to know more before you could act;" and Item 4 = ". . .in which you had to hold yourself back from doing what you wanted to do."

two levels of problem-solving appraisal for subsequent analyses. The final sample consisted of 86 women and 36 men.

The repeated-measures 2 × 2 MANOVA on primary appraisal and coping variables revealed a significant effect for self-perceived problem-solving ability as predicted [$F(3, 116) = 9.17$, $p < .0001$; Hotelling–Lawley Trace = .24]. Follow-up univariate tests demonstrated that there was an effect for self-perceived problem-solving ability on problem-focused coping [$F(1, 365) = 11.45$, $p = .001$] and emotion-focused coping [$F(1, 365) = 7.51$, $p = .01$]. Persons who reported effective problem-solving abilities endorsed more problem-focused coping strategies and fewer emotion-focused strategies across the three administrations. No other effects were significant.

The 2 (PSI) × 2 (Gender) MANOVA on the four secondary appraisal items at each of the three administrations found no significant effects

occurred by level of problem-solving appraisal for any of the items, $F(4, 94) = .67$, *ns*. A significant Time × Gender interaction was observed, $F(8, 240) = 2.34$, $p = .02$. Analysis of univariate tests indicated that this interaction occurred for the item on which respondents rated the degree that the particular stressor "must be accepted," $F(2, 182) = 7.37$, $p < .001$. The interaction indicated that men scored lower than the women at Time 1, but the scores between men and women were equivocal at Time 2. At Time 3, the women had a slightly lower score than the men. More importantly, self-perceived effective and ineffective problem solvers did not differ in their perceptions of changeability, acceptance, need for knowledge, or self-restraint in any of the stressors reported.

Finally, in an attempt to ensure that there were no differences in the perceived importance of stressful events between self-perceived effective and ineffective problem solvers, a validation check was employed. This item required respondents to rate the degree that the unique situation (1) "does not matter to me" to (4) "matters a great deal." A repeated-measures, one-way MANOVA using the two levels of PSI as the independent variable found self-perceived effective and ineffective problem solvers did not differ in their ratings of subjective importance of each stressor, $F(1, 118) = .09$, *ns*; Hotelling–Lawley Trace = .0008. Therefore, there was no systematic bias in the degree of importance perceived in stressful events as a function of time or self-perceived problem-solving ability.

Post Hoc Analyses

It was theoretically important to determine the relationships between the approach-avoidance (AA) and personal control (PC) factors on the PSI to emotion- and problem-focused coping. The approach-avoidance factor has been conceptualized as the component of problem solving that entails actual cognitive–behavioral skills in defining problems and formulating solutions (Heppner, 1988; Heppner & Peterson, 1982). Alternatively, coping may be particularly sensitive to a person's perceived ability to regulate emotions while encountering a stressful event. Persons who report a perceived inability to regulate their emotional experience (high personal control scores) may also report more emotion-focused coping.

Table 3 displays the Pearson correlations computed for the entire sample ($N = 122$) between the three PSI scales and the coping scores across the three assessments. AA scores were significantly correlated in an inverse direction with problem-focused coping scores. However, AA was not correlated with emotion-focused coping. Persons reporting more perceived skills in approaching and defining problems displayed a tendency to report the use of more problem-focused coping strategies.

TABLE 3
CORRELATIONS BETWEEN PSI FACTORS AND COPING SCORES

	PSI factors		
	Approach-avoidance	Personal control	Problem-solving confidence
Problem-focused coping			
Time 1	−.27**	−.06	−.23*
Time 2	−.25**	−.06	−.31*
Time 3	−.20**	.03	−.16
Emotion-focused coping			
Time 1	.06	.25**	.13
Time 2	−.05	.29**	.17
Time 3	−.03	.27**	.12

Note. * $p < .05$; ** $p < .01$. Lower scores on each PSI factor indicate greater perceived ability.

Personal control was significantly correlated with emotion-focused coping. The positive direction of the correlations suggests that persons reporting perceived difficulty in regulating their emotions when problem solving also tended to report the use of more emotion-focused coping. PC scores were unrelated to problem-focused coping, preventing a simple explanation of the problem-solving appraisal–coping relationship based on emotional regulation.

DISCUSSION

Some research has found coping to be characterized by more variability than consistency (Folkman & Lazarus, 1980, 1985). However, the present study indicates that a person's perception of his or her problem-solving skills is associated with the consistent use of certain coping strategies. Persons who perceived themselves as having effective problem-solving skills reported more problem-focused coping and less emotion-focused coping in reaction to three stressful events over time. Additionally, post hoc correlations suggest that perceived ability to approach problems and generate solutions (low scores on the AA subscale) was associated with problem-focused coping; perceived difficulties in regulating emotional reactions while problem solving (high scores on PC subscale) were associated with more emotion-focused coping strategies.

In an earlier study, Heppner et al. (1983) found problem-solving appraisal to be related to use of problem-focused coping strategies. The present study replicates and extends their finding, in that problem-solving appraisal was related to both emotion- and problem-focused coping over

time. Furthermore, these results relate to current information-processing approaches to self-perceived problem-solving ability. The pattern of post hoc correlations indicates that self-perceived ineffective problem solvers may use more emotion-focused strategies due to their lack of ability to regulate their emotional reactions under stress. Self-perceived effective problem solvers may use problem-focused coping strategies as they systematically approach and define problems rather than avoid them. The significant relationship between the approach-avoidance subscale of the PSI and problem-focused coping is theoretically consistent with Heppner and Krauskopf's (1987) model of problem solving, and with definitions of problem-focused coping (Lazarus & Folkman, 1984).

Contrary to predictions, self-perceived problem-solving ability was generally unrelated to one's primary and secondary appraisal of a stressful event. It has been previously assumed that the perception of one's problem-solving ability may relate to the primary appraisal process (Heppner & Krauskopf, 1987, p. 393), or be an integral part of the secondary appraisal process (Nezu, 1986a). The present results support neither position, suggesting that primary and secondary appraisal may be more influenced by the unique aspects of a stressful event and less sensitive to cognitively based variables such as self-perceived problem-solving ability. This interpretation is consistent with the Lazarus and Folkman (1984) conceptualization of the stress appraisal process. Apparently, self-perceived effective and ineffective problem solvers do not differ in their appraisal of personal options for coping and perceived threat in stressful encounters.

The results of the present study provide interesting comparisons to related research. Although self-perceived problem-solving ability was related to coping, stress appraisals were not affected. Other research has shown that stress appraisals may be related to social cognitive personality characteristics, but these relationships may be substantially influenced by selective perceptions and choices that may contribute to a more stressful social context (Rhodewalt & Zone, 1989). Self-perceived effective and ineffective problem solvers in the present study did not differ in the appraised importance, manageability, or degree of threat of the stressors reported. It seems that whether or not individuals subjectively appraised the situation as threatening, and whether or not they perceived the stressor as one they could effectively handle, they initiated the coping process in the ways that were most familiar to them. The appraisal process may become less important as people fall into their typical coping styles: Self-perceived effective problem solvers may begin to generate alternative solutions and plans for action while self-perceived ineffective problem solvers engage in more palliative strategies, such as wishful thinking and trying to deal with their emotions.

Our findings are consistent with an emerging literature that has found distinct patterns of coping despite the initial Lazarus and Folkman (1984) formulation. Neuroticism, in particular, has been linked to consistent coping styles (Bolger, 1990; McCrae & Costa, 1986). Unfortunately, social cognitive personality variables that have been associated with coping styles (Scheier, Weintraub, & Carver, 1986) have also been found to be substantially contaminated by negative emotionality (Smith, Pope, Rhodewalt, & Poulton, 1989). Although the PSI has demonstrated adequate discriminate validity in comparisons with measures of negative affectivity (Larson et al., 1990), the possibility of confounding effects cannot be ruled out. Negative affectivity is fundamentally a mood-based rather than a behavioral dimension (Clark & Watson, 1991, p. 229) and it operates as a general nuisance factor in self-report measures (Watson & Pennebaker, 1989).

In contrast, self-perceived problem-solving ability is a social cognitive construct. Several treatment studies have documented that persons can learn problem-solving skills with corresponding elevations in appraisals of ability and decreases in distress that are maintained over time (Nezu, 1986b; Nezu & Perri, 1989). Since self-perceived problem-solving ability is more domain-specific than other individual difference variables that assess more generalized expectancies, it may be less susceptible to contamination from negative emotionality. Future research needs to address this issue more directly by comparing the relations of self-perceived problem-solving ability and negative affectivity to subjective and objective behavioral indicators. For example, past research would suggest that negative affectivity is strongly related to self-report data, such as distress prior to an examination (e.g., Bolger, 1990; Watson & Pennebaker, 1989). But problem-solving appraisal may demonstrate a stronger relationship with actual behavioral outcomes, since it has been significantly related with performance indices (e.g., semester grade point averages; Elliott et al., 1990).

Certain limitations of the present study should be considered. Because the measures relied on self-report, these findings may not be indicative of overt behavior. Participants also chose the three stressful events they wished to report, and thus, it is unclear as to the nature of such events. The imbalance of gender in the study and the fact that participants were college students limit the generalizability of the findings to other samples.

Although the prospective design of three assessments provides insight into the strength of the relationship between problem-solving self-perception and stress responses, longer periods of time could be studied to ensure the consistency of this relationship. Nevertheless, the results of the present study imply that self-perceived problem-solving ability may have an influential role in the use of coping strategies in stressful situations.

Further research is required to determine the actual behaviors of effective and ineffective self-perceived problem solvers under stress.

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