



Coping strategies in the workplace: Relationships with attributional style and job satisfaction [☆]

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Abstract

This paper examined the relationships between workplace coping strategies, occupational attributional style, and job satisfaction among a sample of 190 nurses employed with a Veterans Affairs Medical Center. As an occupational group, nurses experience high levels of chronic workplace stressors. Participants completed a questionnaire packet containing the Brief COPE, the Minnesota Satisfaction Questionnaire (MSQ)-Short Form, and the Occupational Attributional Styles Questionnaire (OASQ). Results indicated that a positive occupational attributional style was associated with greater use of problem solving/cognitive restructuring coping styles and less use of avoidance coping styles to deal with workplace stress. This pattern of coping strategies was also associated with greater job satisfaction. Further analyses indicated that the relationship between occupational attributional style and job satisfaction was mediated by the use of problem solving/cognitive restructuring, and avoidance coping strategies to deal with workplace stress. Implications for workplace interventions and work adjustment counseling are discussed.

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1. Introduction

The National Institute for Occupational Safety and Health (1999) reported that between 26% and 40% of surveyed workers in the United States consider their jobs to be very stressful. Occupational stress produces negative consequences for workers, such as high health care costs (Goetzel et al., 1998) and increased risk for depression and anxiety (Corpley, Steptoe, & Joeke, 1999). Additionally, it can have a detrimental impact on organizations, by increasing rates of absenteeism (Webster & Bergman, 1999) and turnover (Sonnentag & Frese, 2003). Given the prevalence of workplace stress in our society, along with its negative outcomes, it becomes increasingly important to understand the types of strategies that workers use to cope with these pressures, as well as the determinants and outcomes of workplace coping strategies.

In the current work, we examine the antecedents and consequences of various workplace coping strategies among a sample of nurses at a large, southwestern Veterans Affairs Medical Center (VAMC). Nursing is a particularly relevant population for examining these research questions, as healthcare workers have been identified as being at increased risk for occupational stress (Dowd & Bolus, 1998; Flannery, Hanson, Penk, Flannery, & Gallagher, 1995). In particular, nurses are shown to experience multiple, chronic workplace stressors.

In this study, we examine individual differences in the use of problem solving, positive cognitive restructuring, avoidance, and support seeking coping strategies in the workplace, and assess whether these strategies relate to levels of job satisfaction. We suggest: (1) that the choice to use certain coping strategies over others stems from individual differences in *occupational attributional style*, or ways in which positive and negative events at work are interpreted and explained, and (2) that coping strategies contribute to levels of job satisfaction. Further, we suggest that the relationship between occupational attributional style and job satisfaction is mediated by the use of coping strategies in the workplace. Understanding how coping relates to these variables may provide an important first step in the development of more effective workplace stress intervention programs and can inform counseling for work adjustment.

1.1. Attributional styles and coping

The way one chooses to respond to or cope with a stressful situation may be influenced by one's interpretation and explanation of that event. Past work suggests that individuals have stable dispositional tendencies to use positive or negative attributional, or explanatory, styles to interpret and explain the events that occur in their lives (Abramson, Seligman, & Teasdale, 1979; Peterson et al., 1982). A positive attributional style leads one to view causes of positive events as internal, stable, and global (rather than situation-specific), and causes of negative events as external, temporary, and situation-specific. The opposite explanatory pattern occurs for a negative attributional style: positive events are viewed as being caused by external, unstable, and situation-specific factors; while negative events are seen as stemming from internal, stable, and global factors. A negative attributional style has been associated with depression (Nolen-Hoeksema, Girgus, & Seligman, 1992; Sweeney, Anderson, & Bailey, 1986), physical symptoms, poorer physical health, and even mortality (Peterson, Seligman, & Valliant, 1988).

Attributional style has also been linked to occupational outcomes. Seligman and Schulman (1986) found that salesmen with negative explanatory styles had lower productivity and were more likely to quit than salesmen with more positive explanatory styles. Using the Occupational Attributional Style Questionnaire (OASQ) to examine explanatory style specific to the workplace, Furnham and colleagues found that positive workplace explanatory styles were related to greater commitment, involvement, satisfaction, and motivation for workers in a variety of occupations (Furnham, Brewin, & O’Kelly, 1994; Furnham, Sadka, & Brewin, 1992; Furnham, Stewart, & Medhurst, 1996).

This paper examines whether occupational attributional style has implications for the types of coping styles that individuals use in the workplace. In a study analyzing 100 coping assessments, Skinner and associates (2003) identified several core families of coping. *Problem-solving* includes both action-oriented (e.g., active coping) and cognitive decision-making types of coping strategies (e.g., planning). *Positive cognitive restructuring* involves coping strategies that focus on adjusting one’s view or perspective of a stressful event (e.g., acceptance). Although Skinner, Edge, Altman, and Sherwood (2003) distinguishes it as a separate category, some evidence suggests that positive cognitive restructuring may be functionally combined with the problem-solving family (Ayers, Sandler, West, & Roose, 1996). *Avoidance* coping includes strategies aimed at escaping from or disengaging from a stressful situation, either emotionally or behaviorally. *Support-seeking* includes both problem-focused and emotion-focused support seeking.

Although a person may use a variety of coping strategies across situations or from one stage to another of a stressful encounter (Lazarus & Folkman, 1984), past research suggests that one’s choice of coping strategy can be predicted, in part, by personality characteristics (Armstrong-Stassen, 2004; Carver et al., 1993; McCormick, Dowd, Quirk, & Zegarra, 1998; Scheier, Weintraub, & Carver, 1986). Building on this work, we suggest that individual differences in occupational attributional style may predispose workers toward using certain coping strategies in the workplace. Workers who attribute stressful workplace events to external, temporary, and specific causes (characteristic of a positive style) should see stressful events as “fixable” and apply coping strategies that are geared toward problem solving. Because a positive attributional style is reliant on the ability to interpret situations in positive ways, greater use of positive cognitive restructuring strategies is also expected. Workers with more negative attributional styles perceive causes of negative events in the workplace to be very stable and global, such that stressful events may be seen as unlikely to change. Therefore, they should be more likely to engage in avoidance strategies that allow them to withdraw from workplace problems, rather than actively solve them. We suggest that attributional style is unrelated to support seeking. While those with positive attributional styles may discuss workplace problems with others in hopes of finding a solution, those with negative attributional styles may also seek out others to vent or share feelings of dissatisfaction.

Based on the preceding rationale, the following predictions were made:

- H1: Occupational attributional style is associated with the use of problem solving and cognitive restructuring, such that a more positive attributional style is associated with greater use of these coping strategies.
- H2: Occupational attributional style is associated with use of avoidance strategies, such that a more negative attributional style is associated with greater use of these strategies.
- H3: Occupational attributional style is unrelated to support seeking strategies.

1.2. Coping and job satisfaction

Although some have argued that it is not viable to categorize coping strategies into “right” or “wrong” ways to deal with a stressful situation (Lazarus & Folkman, 1984), some strategies do appear to be more adaptive than others. Both problem solving and cognitive restructuring coping have been linked with physical health and general well-being (Carver et al., 1993; Park & Adler, 2003), while avoidance coping is frequently associated with poorer adjustment and more negative outcomes (Antoni et al., 1991; Armstrong-Stassen, 2004; Carver et al., 1993). Building on these findings, we suggest that the strategies used to cope with stressful situations at work may have important implications for well-being in the workplace, that is to say, job satisfaction. Problem solving and cognitive restructuring coping strategies may lead workers to find tangible solutions to stressful workplace problems or to view stressful situations in more positive ways (e.g., as a “challenge”), resulting in greater job satisfaction. Seeking social support from others may also lead to greater satisfaction by providing workers with positive emotional or instrumental support in the workplace. Conversely, engaging in avoidant strategies, such as disengaging or denying a workplace problem exists, may lead to lower job involvement, an outcome which has been previously associated with decreased job satisfaction (Brown, 1996). Based on this reasoning, the following predictions were made:

- H4: Problem-solving, cognitive restructuring, and support seeking are positively associated with job satisfaction.
- H5: Avoidant coping is negatively associated with job satisfaction.

1.3. Attributional style and job satisfaction

Recent research shows evidence for a relationship between job satisfaction and occupational attributional style (Furnham et al., 1992, 1996). This is consistent with the growing body of evidence suggesting that job satisfaction is, in part, trait-based (Judge, Heller, & Mount, 2002). These findings are also consistent with recent suggestions that attributional style, in particular, is a trait that contributes to well-being. DeNeve and Cooper (1998, p. 219) state in their meta-analysis of personality and subjective well-being (SWB) that “perhaps what is most critical to SWB is ... the tendency to make either positive or negative attributions of one’s emotions and life events.”

These findings lead us to predict, in the current study, that workers with more positive attributional styles will experience greater job satisfaction. Further, we suggest the relationship between attributional style and job satisfaction is mediated by the use of coping styles. Because individuals with positive attributional styles explain and construe stressful events in optimistic ways, they may be more likely to utilize problem solving and cognitive restructuring strategies and less likely to use avoidant strategies to deal with stressful workplace situations. This pattern of coping strategies, demonstrated in past research to be adaptive, may bring the stressful situation to a more satisfying conclusion, ultimately contributing to greater job satisfaction. We did not predict a relationship between explanatory style and support-seeking coping strategies, and therefore do not hypothesize that support seeking mediates the relationship between explanatory style and job satisfaction.

- H6: Attributional style is associated with job satisfaction, such that a more positive attributional style is related to greater job satisfaction.
- H7: The relationship between attributional style and job satisfaction is mediated by problem-solving, cognitive restructuring, and avoidance coping strategies.

2. Method

2.1. Participants and procedure

Participants were 190 registered nurses (RN) and licensed practical nurses (LPN) employed at a large southwestern VAMC (49.9% response rate). The mean participant age was 48.91 years old ($SD = 8.78$). Participants had been employed for a mean of 21.01 years in the nursing profession ($SD = 9.91$), and 11.46 years with a VAMC ($SD = 8.21$). Mean length of employment with the current VAMC was 10.17 years ($SD = 7.40$). Of this sample, 86.3% were RN, 10.5% were LPN, and less than 2% indicated other training. Approximately 61% worked in an inpatient facility and 32% worked in an outpatient facility. Most participants reported working a day shift (71.6%), with 6.3% working an afternoon/evening shift and 15.3% working a night shift. The majority reported working 31–40 h/week (57.4%), while 33.7% reported working over 40 h, and 6.3% reported working fewer than 30 h. Self-reported typical ($M = 3.34$) and current levels of stress ($M = 3.32$) suggest that this sample experienced moderate to high levels of stress.

The researchers met with the VAMC administration and local union prior to conducting the study. All RN and LPN at the facility ($N = 381$) were sent an email explaining the study and requesting their participation. Flyers announcing the study were posted in central locations, and the union and administration encouraged participation through announcements at staff meetings. Surveys were sent via interoffice mail to all nurses in the facility. Upon returning the survey, participants received small novelty items and the NIOSH document *Stress...At Work*, as incentives for participation.

2.2. Measures

2.2.1. Coping styles

The Brief COPE (Carver, 1997) is a shortened form of the COPE inventory (Carver, Scheier, & Weintraub, 1989) and consists of 28 items that measure different behaviors and cognitive activities one might engage in to cope with stress. Past research indicates acceptable levels of reliability for the Brief COPE (Carver, 1997), and scores on the COPE have been shown to predict several relevant outcomes, such as distress, stress, and depression (see Brissette, Scheier, & Carver, 2002; Carver et al., 1993). In the current study, individuals were asked to rate each item on a 4-point scale (1: “I haven’t been doing this at all; 4: “I’ve been doing this a lot”) to indicate the degree to which they typically used each strategy to deal with workplace stress.

As was discussed earlier, there is conflicting evidence whether positive cognitive restructuring strategies and problem solving strategies load onto a single factor (Ayers et al., 1996) or should be treated separately (Skinner et al., 2003). Therefore, prior to the main data analysis, a preliminary analysis was conducted on the Brief COPE items data to determine whether these categories should be combined or examined separately in the current study. The factor structure of the Brief COPE was examined using a principle components

Table 1
Factor structure of the brief COPE for the nurse sample ($N = 190$)

Brief COPE items	Factor 1	Factor 2	Factor 3
<i>Active</i>			
I concentrate my efforts on doing something about the situation I'm in	.76*	.13	.07
I take action to try to make the situation better	.80	.15	-.13
<i>Planning</i>			
I try to come up with a strategy about what to do	.76	.19	-.08
I think hard about what steps to take	.66	.10	-.13
<i>Acceptance</i>			
I accept the reality of the fact that it has happened	.59	.04	-.24
I learn to live with it	.15**	.02	.01
<i>Reframing</i>			
I try to see it in a different light, to make it seem more positive	.54	.16	-.08
I look for something good in what is happening	.50	.17	-.18
<i>Emotional support</i>			
I get emotional support from others	.04	.86	-.01
I get comfort and understanding from someone	.11	.86	-.05
<i>Instrumental support</i>			
I get help and advice from other people	.38	.69	-.05
I try to get advice or help from other people about what to do	.35	.68	.04
<i>Behavioral disengagement</i>			
I give up trying to deal with it	-.19	.01	.71
I give up the attempt to cope	-.05	-.14	.76
<i>Denial</i>			
I say to myself "this isn't real"	-.07	.11	.68
I refuse to believe that it has happened	-.01	-.04	.74
Eigenvalue	6.02	3.12	2.00
Variance explained	21.49%	11.12%	7.15%

Notes. Factor loadings are not reported for items from the Blame, Vent, Humor, Religion, and Substance Use subscales of the Brief COPE. These items did not have factor loadings $>.40$ on any of the above factors, and were not conceptually relevant to the hypotheses being tested here. *Values in bold indicate factor loadings $\geq .40$. **Although the factor loading of this item is lower than conventional standards, it is the strongest factor loading for this item, and correlates well with the other acceptance subscale item ($r = .29$), as well as with most of the other items loading on this factor. It also fits conceptually with the other items loading on the factor. Therefore, this item was retained as part of the cognitive restructuring/problem-solving factor of coping.

factor analysis with varimax rotation. Three factors (see Table 1) were extracted accounting for approximately 40% of the variance. The composition of these three factors corresponded closely to the coping framework outlined in our hypotheses. Items from the planning, active coping, acceptance, and reframing subscales of the Brief COPE loaded on Factor 1, corresponding to problem solving and cognitive restructuring coping. Items from the emotional support and instrumental support subscales loaded on Factor 2, corresponding to support-seeking approaches. Items from the behavioral disengagement and denial subscales loaded on Factor 3, corresponding to avoidance coping. Based on this analysis, the items were grouped into three categories: Problem Solving and Cognitive Restructuring Strategies (8 items); Avoidance Strategies (4 items); and Support Seeking

Strategies (4 items). The Cronbach's α s indicate acceptable reliability for these item groupings (.82, .67, .84, respectively).

2.2.2. Workplace attribution style

The Occupational Attributional Style Questionnaire (OASQ) measures attributional style specific to the workplace (Furnham et al., 1992) and consists of eight hypothetical situations pertaining to the workplace. Four describe positive outcomes (e.g., “imagine that you apply for a promotion and get it”) and four describe negative outcomes (e.g., “imagine that you can't get all the work done that others expect of you”). In the current study, we used a subset of six of the original situations (3 positive and 3 negative) that were judged by the authors to be most relevant to the occupation of nursing. Individuals are asked to list the most likely cause of each outcome, and rate that cause on 5 dimensions (internality; stability; specificity; externality; controllability) using 7-point scales. Ratings across dimensions are summed to compute attributional scores for positive and negative situations, which are then summed into an overall occupational attributional score. The possible range of summed scores on the OASQ is between 30 and 210, with higher scores indicating a more positive attributional style and lower scores indicating a more negative attributional style. Furnham et al. (1996) report that acceptable reliabilities have been obtained for the OASQ in past research (average alphas ranging from .68 to .72, test–retest reliability: r 's $>.80$). The α of the OASQ when used in the present study was somewhat lower ($\alpha = .61$). This may be due to the fact that only 6 of the 8 workplace scenarios were used in the current study. Past work has shown that reliability of attributional style measures typically increases with the number of scenarios that are used (Peterson et al., 1982). The OASQ has demonstrated good validity in its ability to predict job-related attitudes, motivation, commitment, and involvement (Furnham et al., 1992, 1994).

2.2.3. Job satisfaction

The Minnesota Satisfaction Questionnaire—Short Form (MSQ) assesses an individual's level of satisfaction with their current job (Weiss, Dawis, England, & Lofquist, 1967). The individual is asked to rate their level of satisfaction with each of 20 work-related needs on a 5-point scale ranging from “not satisfied” (1) to “extremely satisfied” (5). The responses to all 20 items can be summed to produce a *general (global) satisfaction* score. Additionally, intrinsic and extrinsic components of satisfaction can be examined. *Intrinsic job satisfaction* (assessed using 11 items) refers to those aspects of the job that are inherent to the nature of the work being performed and which are primarily experienced internally by the worker (e.g., sense of challenge, sense of achievement, level of independence). *Extrinsic job satisfaction* (assessed using 9 items) refers to those aspects of the job that are not inherent to the nature of the work and which are primarily under the control of one's employer (e.g., compensation, job security, working conditions). The MSQ has demonstrated strong reliability in previous work, as well as in the current study (α s $>.80$); and it has repeatedly been shown to be correlated with work adjustment outcomes (Dawis & Lofquist, 1984; Eggerth, 2004; Rounds, Dawis, & Lofquist, 1987).

2.2.4. Perceived stress ratings

Two items assessed individuals' perceptions of their *current* level of stress and their *typical* level of stress in the workplace. Stress was rated on 5-point rating scales ranging from “little or no stress” (1) to “extreme stress” (5).

2.2.5. Demographics

Individuals were asked to report their age, length of time employed as a nurse, length of time employed with a VA hospital, hours worked per week, and type of shift worked (day/evening/night).

3. Results

3.1. Descriptive statistics

Means, standard deviations, reliability estimates, and intercorrelations for the MSQ, OASQ, and Brief COPE scales are provided in Table 2. Use of problem-solving/cognitive restructuring strategies was correlated positively ($r = .43, p < .01$) with use of support seeking categories, indicating potential overlap or simultaneous use of these strategies to reduce stress. Use of avoidant strategies was correlated negatively ($r = -.25, p < .01$) with problem-solving/cognitive restructuring strategies, but unrelated ($r = .06, ns$) to support-seeking strategies. Relationships of job satisfaction, attributional style, and coping to the demographic variables were examined. Age ($r = .16, p = .05$), number of years as a nurse ($r = .19, p = .02$), and number of years working at the VAMC ($r = .21, p = .01$) were positively associated with job satisfaction. These demographic variables were controlled for in all further analyses involving job satisfaction. Other demographic variables, including type of job (RN/LPN), shift, and number of hours worked per week were not associated with our primary measures.

3.2. Relationships between occupational attributional style, coping, and job satisfaction

Consistent with Hypotheses 1 and 2, a more positive occupational attributional style was associated with greater use of problem-solving/cognitive restructuring strategies ($r = .21, p < .01$) and less frequent use of avoidance strategies ($r = -.18, p < .05$). As predicted in Hypothesis 3, attributional style was not related to the use of support-seeking strategies ($r = .08, ns$).

To test Hypotheses 4 and 5, correlations between coping strategies and job satisfaction were examined controlling for age, number of years as a nurse and number of years at the VAMC facility. Consistent with predictions, problem-solving/cognitive restructuring ($r = .39, p < .01$) and support seeking coping ($r = .15, p = .05$) were associated with greater job satisfaction, while the use of avoidant coping was associated with less job satisfaction ($r = -.19, p = .02$). Stepwise linear regression analyses were also conducted to examine the

Table 2
Descriptive statistics and intercorrelations between OASQ, MSQ, and brief COPE scores

Variables	Mean	SD	α	1	2	3	4	5
OASQ (1)	101.75	13.11	.61	—	.12 _a	.21** _b	-.18* _b	.08 _b
MSQ (2)	58.88	14.40	.92		—	.39** _c	-.19** _c	.15* _c
Problem/Cog (3)	2.98	.55	.82			—	-.25** _d	.43** _d
Avoidance (4)	1.40	.48	.67				—	.06 _d
Support Seeking (5)	2.64	.70	.84					—

Note. a subscript indicates $N = 147$; b subscript indicates $N = 167$; c subscript indicates $N = 159$; d subscript indicates $N = 189$. Variations in sample size across analyses are due to missing data. * $p < .05$, ** $p < .01$.

Table 3
Linear regression analysis for coping strategies predicting job satisfaction

Step	Variable	<i>B</i>	<i>SE B</i>	β	<i>R</i> ²
Step 1					.05
	Age	-.04	.18	-.03	
	Years as nurse	.02	.01	.13	
	Years at VAMC	.03	.02	.16 ⁺	
Step 2					.22**
	Problem solving/Cog.	10.00	2.31	.37**	
	Support seeking	.07	1.69	.01	
	Avoidance	-3.24	2.37	-.11	

Note. ** $p < .01$; ⁺ $p < .10$.

coping predictors of job satisfaction. In step one, the demographic variables were entered into the model to predict job satisfaction. In step 2, the three categories of coping were entered into the model (see Table 3). Together, the demographic variables and coping strategies accounted for 22% of the variance in job satisfaction, with use of problem solving/cognitive restructuring coping emerging as the only significant predictor ($\beta = .37, p < .01$).

To test Hypothesis 6, partial correlations between scores on the OASQ and MSQ were computed to examine the relationship between occupational attributional style and job satisfaction while controlling for age, years as a nurse, and years with the VAMC. Results indicate that contrary to prediction, a positive attributional style was not significantly associated with greater job satisfaction, although results show a trend in the predicted direction ($r = .12, p = .13$). However, a closer examination of the MSQ scale revealed differential patterns of results for intrinsic versus extrinsic job satisfaction. Specifically, intrinsic job satisfaction (satisfaction pertaining to aspects of the job that are experienced internally and inherent to the nature of the work) was significantly associated with occupational attributional style ($r = .19, p = .02$), while extrinsic job satisfaction (satisfaction with aspects of the job that are not inherent to the nature of the work and which are primarily under the control of one's employer) was not ($r = .05, ns$).

3.3. Mediation analysis

Analyses were conducted to test whether the relationship between attributional style and job satisfaction was mediated by coping style, as predicted in Hypothesis 7. Because attributional style showed different relationships with intrinsic and extrinsic job satisfaction, these two components of job satisfaction were examined separately. Criteria for potential mediators (Frazier, Tix, & Baron, 2004; Kenny, Kashy, & Bolger, 1998) include that the mediating variable be associated with both the predictor and the outcome variable. Both the problem solving/cognitive restructuring coping category and the avoidant coping category met these conditions. Several authors (Frazier et al., 2004; Kenny et al., 1998; Shrout & Bolger, 2002) suggest that a predictor–outcome relation is not a required precondition of mediation testing. Therefore, it was appropriate to examine both intrinsic and extrinsic job satisfaction in our tests of mediation, although only intrinsic showed a direct relationship with attributional style.

Mediation tests were conducted in SPSS version 14 using the Bootstrap sampling method, as recommended by Shrout and Bolger (2002). Age, number of years in the

Table 4
Summary of indirect effects for intrinsic and extrinsic job satisfaction

Predictor variable	Mediator variable	Criterion variable	<i>B</i>	95% CI	Significance (<i>p</i>)
OASQ	Avoidant	Intrinsic Sat	.021	.002 to .055	<i>p</i> < .05
OASQ	Problem/Cog	Intrinsic Sat	.043	.011 to .090	<i>p</i> < .05
OASQ	Avoidant	Extrinsic Sat	.014	–.001 to .044	<i>p</i> > .05
OASQ	Problem/Cog	Extrinsic Sat	.023	.002 to .059	<i>p</i> < .05

Note. *N* = 143. Sat, satisfaction; Problem/Cog, Problem Solving/Cognitive.

Restructuring Coping; OASQ, Occupational Attributional Styles Questionnaire; CI, Confident Intervals; *B*, unstandardized coefficient. All values are based on bias corrected Bootstrap estimation.

nursing profession, and number of years employed with the VAMC were included as covariates in the analyses. Bootstrap analysis provides an empirical method of testing the significance of estimated indirect (mediated) effects using sampling with replacement. The indirect effects are computed across a large number of samples (e.g., 1000), each having the same size as the original sample. These samples are drawn with replacement from the original data set. The mean indirect effects and confidence intervals are then calculated using this bootstrap sample of indirect effect estimates. To determine statistical significance, the 95% confidence intervals for the indirect effects are examined; if a value of zero does not fall within the range of the confidence interval, this indicates that the mediational effect is statistically significant at a value of $p < .05$ (Shrout & Bolger, 2002).

In this study, indirect effects were computed for each mediator variable (see Table 4). For the intrinsic job satisfaction model, the indirect effects for both avoidant and problem solving/cognitive restructuring coping strategies were statistically significant ($B = 0.021$, 95% CI = 0.002–0.055 and $B = 0.043$, 95% CI = 0.011–0.090, respectively), suggesting that these two variables can (for the most part) account for the relationship found between attributional style and intrinsic satisfaction. For the extrinsic job satisfaction model, the indirect effect of problem-solving/cognitive restructuring was statistically significant ($B = 0.023$, 95% CI = 0.002–0.059), but the indirect effect of avoidant coping was not, indicating that only problem-solving/cognitive restructuring mediated the relationship between attributional style and extrinsic job satisfaction.

4. Discussion

The contribution of occupational attributional style to the use of various coping strategies was examined in this study. We predicted that the more positive one's occupational attributional style, the more likely one is to use problem solving and positive cognitive restructuring strategies and the less likely one is to use avoidance strategies to deal with workplace stress. These predictions were supported. To some degree, the association between attributional style and these coping strategies is similar to the relationship that has been found in past research between dispositional optimism and coping (Carver et al., 1993; Scheier et al., 1986). While dispositional optimism focuses on the degree to which one expects positive future outcomes, attributional style assesses the positive or negative ways in which people explain past events. Therefore, it is consistent that both variables might relate to similar patterns of coping styles.

The findings in this study suggest that coping successfully with workplace stress confers benefits in the workplace, with regard to workers' satisfaction with their jobs. The use of

problem-solving, cognitive restructuring and support-seeking strategies was associated with greater job satisfaction. In fact, these coping strategies accounted for over 20% of the variance in satisfaction. The correlations found between coping strategies and job satisfaction in this study are similar in magnitude to correlations previously reported in the person-environment fit literature between job satisfaction and other vocationally relevant variables (Assouline & Meir, 1987; Lofquist & Dawis, 1984). The current findings suggest that coping strategies may be an important contributor to job satisfaction that has been overlooked in past research. Further, they are consistent with the broader coping literature that has shown links between coping and well-being.

4.1. Coping style as a link between attributional style and job satisfaction

Past research indicates that job satisfaction has a trait-based component, and that attribution-related traits may be of particular significance in this area (see Furnham et al., 1994, 1996). However, our results indicated that attributional style was associated only with intrinsic job satisfaction, not extrinsic job satisfaction. Extrinsic satisfaction measures satisfaction with aspects of the job under the control of the employer (e.g., salary, working conditions), whereas intrinsic satisfaction derives from aspects of the job that are experienced internally (e.g., sense of achievement, independence, responsibility). It is possible that such internal perceptions may be more subject to attributional influences. For example, attributions for aspects of the job controlled by the employer may not be as malleable as attributions for aspects of the job that are experienced internally. By default, these extrinsic aspects are externally caused, less controllable, and unlikely to change. Therefore, one's attributional style may have little impact on how these factors are perceived or how much satisfaction one feels in relation to them. Additionally, extrinsic satisfaction relates to more tangible or concrete aspects of the job, while intrinsic satisfaction relates to more intangible, abstract aspects of the job; it is possible that attributional style exerts greater influence on satisfaction with abstract aspects compared to concrete aspects of the job. Given that these speculations are post hoc, this question should be addressed further in future research.

As predicted, the relationship between attributional style and job satisfaction was mediated by the use of coping strategies. This suggests that rather than attributional style exerting a direct influence on satisfaction, attributional style affects job satisfaction indirectly through its influence on coping. While problem solving/cognitive restructuring and avoidant coping strategies both mediated the relationship between attributional style and intrinsic job satisfaction, only problem solving/cognitive restructuring was a significant mediator in relating attributional style and extrinsic job satisfaction. It is of interest to note that although an initial relationship was not found between attributional style and extrinsic job satisfaction, an indirect effect was found for these variables. This suggests that the causal link between attributional style and extrinsic job satisfaction may be more distal or is influenced by additional variables that have a suppressor effect (Shrout & Bolger, 2002). Further research should be conducted to explore this possibility.

4.2. Implications

The current findings underscore the importance of understanding effective coping strategies for the workplace, and highlight the role that coping plays in linking individual

differences among workers to job-related outcomes. The finding that positive attributional styles are associated with greater job satisfaction has practical implications for work-adjustment counseling and workplace interventions, suggesting that attributional retraining, a process where individuals are trained to modify their typical patterns to make more positive attributions for events, may be beneficial. Further, workplaces may want to emphasize the use of problem solving and cognitive restructuring strategies to deal with job-related stress.

The current findings may also easily be linked with mainstream cognitive-behavioral therapy (CBT) models. Sapp (1997) states that CBT is based upon the premise that individuals actively create their reality through their interpretations of events, which in turn influence how they choose to respond to an event. CBT helps individuals to identify the underlying beliefs (or attributions) that influence their interpretations of events, challenges the beliefs that are inaccurate or tend to lead to negative outcomes, and finally, replaces such beliefs with others that are more accurate or which tend to lead to more positive outcomes. Counselors addressing work adjustment issues with clients could use the same CBT methods (retribution, redefining, etc.) that would be used to address other problems areas to lead clients toward adopting more positive attributions about workplace events and to link these new attributions with more effective coping strategies; ultimately leading to increased levels of job satisfaction. Many current workplace training interventions are guided by CBT concepts and emphasize the use of problem solving and cognitive restructuring strategies to deal with job-related stress (Heany, 2003). In this context, the findings of this study may be viewed as lending empirical support to current, theory-guided interventions. It should also be noted that retraining individuals to make more positive work-related attributions is very congruent with the emerging field of positive psychology, particularly with Seligman's concept of learned optimism (Seligman & Csikszentmihalyi, 2000).

4.3. *Limitations and future directions*

The current study has certain limitations that should be noted. Although the direction assumed here is consistent with past research in suggesting an influence of personality traits on coping strategies and an influence of coping strategies on measures of well-being (Antoni et al., 1991; Carver et al., 1993; McCormick et al., 1998), it is possible that the influence between variables may be reversed, or even reciprocal. We suggest applying longitudinal designs in future research to more clearly test the direction of the observed relationships. Longitudinal designs could also be used to examine the long-term effect of these variables on other outcomes such as subsequent levels of workplace stress, job turnover, and levels of motivation and productivity in the workplace. Although the measures used here were well-validated scales that have been used widely in the literature, self-report measures raise the concern of common method variance and socially desirable responding. Therefore, future work in this area should strive for a multi-method multi-measure approach. Finally, because nurses may be a somewhat unique population in that the nature of their job is inherently health-oriented, the relationships between the variables examined here should be tested and replicated among other high stress occupations.

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