

# **Occupational Burnout, Tolerance for Stress, and Coping Among Nurses in Rehabilitation Units**

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**ABSTRACT.** The relation of problem-solving confidence, perceived tolerance, and situation-specific coping efforts to occupational burnout was examined among nurses in physical rehabilitation units. Consistent with predictions, confidence in one's ability to handle problems and perceived tolerance were significantly predictive of lower burnout scores, regardless of time spent on the job. Of the coping variables, emotion-focused coping was significantly associated with higher burnout scores. Post-hoc inspection of self-reported coping activities generated in response to a thought-listing probe indicated that some coping efforts (e.g., taking time off from work, confronting a supervisor) could be construed as symptoms of burnout, according to theoretical conceptualizations. Implications for contemporary notions of burnout and psychosocial interventions with rehabilitation staff are discussed.

Occupational burnout is considered endemic to the human service professions, and the construct has achieved considerable — albeit uncritical — acceptance in the popular culture and contemporary workplace. People in the human service professions are particularly at risk for burnout as their work is emotionally involving, and work outcomes can be relatively independent of the effort exerted by the professional (Maslach & Jackson, 1982; Pines & Aronson, 1989). Occupational burnout is associated with increased work experience

(Sherwin et al., 1992), increased workload (Maslach & Florian, 1988), absences and time missed from work (Firth & Britton, 1989), impaired empathy and cynical attitudes toward clientele (Shinn, Rosario, Morch, & Chesnut, 1984; Williams, 1989), and with thoughts about leaving and actual job termination (Jackson, Schwab & Schuler, 1986). Rehabilitation staff who report fewer personal resources appear to be more susceptible to burnout than those with more resources, regardless of the time spent on the job (Clanton, Rude, & Taylor, 1992). The deleterious effects of burnout in rehabilitation have been observed across disciplines in the rehabilitation setting (Stav & Florian, 1986; Ursprung, 1986).

Despite these findings, research has cast shadows on the ubiquitous nature and theoretical parameters of the burnout construct, suggesting that understanding of this phenomenon is incomplete. For example, burnout has displayed considerable overlap with measures of depression (Glass, McKnight, & Valdimarsdottir, 1993) and neuroticism (Hills & Norvell, 1991). Experimental research indicates that rehabilitation nurses with higher burnout scores may be preoccupied with self-relevant thoughts when confronted with challenging patients, and may not necessarily denigrate these patients in the manner originally assumed (Marmarosh et al., 1994). Several studies indicate that social-cognitive processes such as commitment to work (Taft, 1989), self-efficacy (Chwalisz, Altmaier, & Russell, 1992), learned resourcefulness (Clanton et al., 1992), and hope (Sherwin et al., 1992) might insulate individuals from burnout.

Social-cognitive processes are often embedded within theoretical frameworks that offer directions for psychological interventions (Elliott & Marmarosh, 1995). It is important, then, to identify characteristics predictive of burnout that may be amenable to preventive and remedial strategies. Some characteristics may relate to global and relatively stable characteristics of the individual; others may be more situation-specific. For example, the transactional model of stress appraisal and coping (Lazarus, 1991) and contemporary theories of work adjustment (Dawis & Lofquist, 1984) emphasize that situation-specific appraisals of the self and one's options for coping are salient mechanisms in responding to job stress. The Minnesota Theory of Work Adjustment (MWA; Dawis & Lofquist, 1984) stipulates that work stress is a subjective psychological state that occurs when the correspondence between the person and the environment becomes imbalanced. The resulting state, termed *dis correspondence*, then motivates the person to strive to regain some sense of equilibrium. In this model, some people are able to tolerate stress before acting to reduce the *dis correspondence*. Thus, the perceived ability to tolerate stress is an important cognitive appraisal process that can potentially buffer the negative effects of work-related stress. A recent test of this hypothesis verified that perceived tolerance is a strong predictor of emotional distress associated with an occupational stressor among school teachers and journalists, and this relationship is not mediated by trait levels of affectivity (Elliott, Chartrand, & Harkins, 1994).

Alternatively, occupational burnout may stem from employee inability to cope effectively with recurrent job demands and stressors. The social problem-solving model posits that persons with chronic depression and anxiety have a negative problem orientation that inhibits and impairs problem-solving attempts (Nezu & D'Zurilla, 1989). A person with a negative orientation harbors pessimistic attitudes about the self and is unable to deal effectively with minor problems so that they exacerbate over time. These ineffectual behaviors and unfortunate consequences reinforce the negative orientation (Nezu, 1987). In contrast, an employee with a positive orientation is likely to maintain a sense of competency in daily tasks, and is capable of staving off prolonged periods of negative mood, and may even experience a positive emotional tone under stressful conditions (Elliott, Sherwin, Harkins, & Marmarosh, 1995; Study 2). An employee with a positive orientation would be more motivated to dispatch with routine problems on the job, maintain an optimal emotional tone, feel more competent, and be less vulnerable to burnout. In contrast, a person with a negative orientation will likely be preoccupied with unresolved personal and vocational problems, and will then rely on emotion-focused coping strategies (MacNair & Elliott, 1992). Employees with higher levels of burnout use more palliative and less problem-focused coping strategies than colleagues who have lower burnout scores (Chwalisz et al., 1992; Ogus, 1992; Thorton, 1992).

Despite the importance many theorists have placed on situation-specific appraisals and coping efforts in the workplace (e.g., Lazarus, 1991), it is uncertain if these behaviors contribute to the prediction of burnout once dispositional factors are considered. Distressed people may simply have habitual ways of coping, generally (Coyne, Aldwin, & Lazarus, 1981; MacNair & Elliott, 1992). It is possible that situation-specific appraisals and coping add little toward the prediction of burnout once a person's general problem-solving orientation is taken into account.

These issues were explored in the present study. Specifically, a positive problem orientation was expected to be associated with lower burnout among nurses in chronic care units, after taking time on the job into account. It was uncertain, however, if situation-specific tolerance appraisals of job stress would be associated with burnout after accounting for one's problem-solving orientation. Similarly, it was unclear if coping would contribute to the prediction of burnout when added in the final step of the regression equation.

## **METHOD**

### **Participants**

Participants were 98 nurses (86 women, 12 men; average age = 38.33,  $SD = 10.4$ ) recruited from three different sites. Twenty-three worked as nurses for in-patient rehabilitation units at the University of Alabama-Birmingham, 42 were with the rehabilitation service at Rush-Presbyterian-St. Luke's Medi-

cal Center in Chicago, and 33 were with the in-patient rehabilitation programs at the University of Missouri Health Sciences Center. Of the final number ( $n = 88$ ) retained for data analysis, 68 were registered nurses, 9 were licensed professional nurses, 6 were certified nursing assistants, and 5 were student nurses.

## Procedure

Participants were informed of the purpose of the study and those interested were given a set of questionnaires that included the measures employed in this study. They were first asked to complete a measure of burnout (described below), and were then administered a "stress questionnaire" that required them to list the stressors encountered at work and their ability to tolerate this stressor. Participants were then asked to list their typical ways of coping with this stressor. They subsequently completed a measure of problem solving and returned the packet to a contact person at each respective site. A response rate of 68% was observed across sites.

## Measures

The instructional set and phenomenological format for the stress questionnaire were taken from the transactional model of stress appraisal and coping (Folkman & Lazarus, 1986; 1988). Rather than provide a list of stressful events, participants were asked to list the five most common stressors experienced at work and from this list, identify the most stressful experience they encountered at work. Participants referred to this stressor when responding to the measure of tolerance, and when listing their typical ways of coping with the stressor. This procedure attempts to provide a more phenomenological analysis of the situation-specific relations between appraisals of tolerance and coping efforts. The device has been used in previous studies of occupational stress (Elliott, Chartrand, & Harkins, 1994). After participants completed this questionnaire, they were asked to complete the measure of self-appraised problem-solving ability.

**Perceived Tolerance.** A 150 mm visual analogue scale (VAS) was used to measure appraisals of tolerance. The measure of tolerance — similar to the experimental scale provided by Dawis and Lofquist (1984; p. 216) — required participants to respond to the following statement, "How difficult is it for you to tolerate this stressor?," referring to the most stressful item identified earlier by each participant. At the extreme left the line was anchored with "not at all" in terms of difficulty; the extreme right was anchored with "the most imaginable" in terms of difficulty. Participants were required to indicate their appraisal by placing an "X" between the anchors. Higher scores reflect perceptions of less tolerance. Although this measure is situation-specific, it has

nonetheless yielded a six-week test-retest coefficient of .61 (Harkins, Elliott, & Wan, 1996). Evidence of validity has been observed in correlations in hypothesized directions with ratings of emotional distress on the job (Elliott, Chartrand, & Harkins, 1994).

**Coping.** Following the tolerance item, participants were then given the following instructions: "List the different ways you have *coped* with this stressor, or with the circumstances or feelings that accompany the stressor." The thought-listing approach was used for several reasons. Many of the instruments used to assess coping make several a priori assumptions about coping options that respondents have at their disposal. Often coping instruments are administered in an inconsistent fashion; some studies require the respondent to endorse only those that apply to the situation, and others require respondents to denote their usual coping tendencies. The thought-listing assessment of coping relied primarily on the phenomenological interpretation of coping as defined by the participant. Thought-listing techniques are efficient measures of cognitive responses, which represent the end product of information-processing in reaction to a situation, object, or issue (Cacioppo, Harkins, & Petty, 1981). The thought-listing device provides a more ambiguous instructional set than direct measures, and may thus be less susceptible to social desirability effects as it elicits more naturally occurring, spontaneous, and familiar responses from participants.

Individuals unfamiliar with the study rated each strategy according to the operational definitions for problem-focused and emotion-focused coping. Specifically, emotion-focused coping was defined as any effort to "...change either (a) the way the stressful relationship with the environment is attended to (as in vigilance or avoidance), or (b) the relational meaning of what is happening, which mitigates the stress event though the actual conditions of the relationship have not changed" (Lazarus, 1993, p. 238). Items coded as problem-focused coping efforts included any attempt to "...change the troubled person-environment relationship by acting on the environment or on oneself" (Lazarus, 1993, p. 238). Thus, emotion-focused efforts were construed as palliative strategies, and problem-focused efforts were instrumental and active strategies to alter the person-environment relationship (Auerbach, 1989). For example, "made light of the situation" would be coded as a palliative, emotion-focused strategy; "reorganized my schedule to prepare for the meeting" would be coded as an instrumental, problem-focused strategy. Responses that could not be coded were categorized as "miscellaneous." Interrater coefficients indicated adequate agreement between the two ratings of emotion-focused (.90) and problem-focused coping (.92). To obtain a single index for each coping variable, the ratings from two separate judges on each coping variable were summed and averaged. The average scores for each were used in subsequent analyses.

**Problem-Solving Orientation.** The Problem Solving Inventory - Form A (PSI; Heppner, 1988) was used to measure self-appraised problem-solving ability. The PSI contains 32 items which are rated on a 6-point Likert scale (1

= strongly agree to 6 = strongly disagree). The PSI contains three factors: Problem-Solving Confidence (PSC), Approach-Avoidance (AA), and Personal Control (PC; Heppner, 1988). A total score is derived by summing the factor scores. Reliability estimates reveal that these constructs are internally consistent (alpha coefficients from .72 to .90) and stable over a 2-week period (test-retest correlations from .83 to .89; Heppner, 1988). Validity estimates indicate that the PSI total score and subscales are significantly related in predicted directions with a variety of self-report and observational measures (Heppner, 1988). Lower scores reflect more effective problem-solving ability, and higher scores denote a more negative, ineffective problem-solving repertoire.

Recently, Elliott and colleagues have asserted that the Problem-Solving Confidence and Personal Control factors parallel the problem-solving orientation component delineated in the social problem-solving model (Nezu & D'Zurilla, 1989). Effective PSC scores, in particular, have been associated with a prosocial demeanor and a proclivity for positive affects in everyday and stressful situations (Elliott, Herrick, MacNair, & Harkins, 1994; Elliott et al., 1995). In contrast, ineffective PSC scores have been consistently predictive of depression (e.g., Priester & Clum, 1993). Ineffective PSC scores were expected to be significantly predictive of greater burnout in the present study. Neither the PC nor the AA factor were included for analyses because these assess aspects of the problem-solving process theoretically unrelated to burnout. Thus, they were excluded from the analyses.

**Occupational Burnout.** A 21-item burnout measure developed by Pines and Aronson (1989) was used. This measure lists 21 possible symptoms of occupational burnout, and a respondent rates on a 1 (never) to 7 (always) scale the frequency of each experienced symptom during the past week at work. Scores are derived from an algorithm provided by the authors. The authors report acceptable test-retest reliabilities over 1-month (.89), 2-month (.76), and 4-month (.66) intervals. Internal consistency coefficients have averaged between .91 and .93. Considerable evidence for construct validity is apparent in meaningful correlations with measures of work satisfaction, intentions to leave work, job turnover, and physical health problems (Pines & Aronson, 1989; pp. 220-222). Higher scores indicate a greater intensity of burnout.

### Data Analysis

The data were first inspected to ensure assumptions for regression procedures were met. Multivariate outliers were identified in the data, based on the pattern of residuals across the self-report variables ( $n = 10$ ). These outliers indicated that these participants were responding either in an extreme or random fashion. Consequently, these outliers appeared to exert an unusual influence on the results and were thus deleted. An examination of the plotted residual scores versus the predicted scores evidenced a pattern of great dispersion of variances across predicted scores. Consequently, an attempt was

made to correct this heteroscedasticity by employing a reciprocal transformation of burnout scores as a variance-stabilizing measure (Tabachnick & Fidell, 1989). The PSC and time variables were also skewed; the pattern of PSC raw scores revealed a clear grouping toward the lower range of the distribution. This pattern indicated that the majority of participants in the present sample reported a greater confidence in their ability to solve problems. The lack of a normal distribution violated basic assumptions necessary to conduct parametric procedures, generally, and regression analyses, specifically. Therefore, a square root transformation was computed to normalize the distributions of the PSC and time variables (Tabachnick & Fidell, 1989). These procedures were necessary to obtain the most normal-appearing distribution for these variables, based on inspection of the skewness and kurtosis for each distribution.

After these transformations, time on the job, problem-solving confidence, perceived tolerance, and the emotion-focused and problem-focused coping scores were entered in successive steps in a regression equation to predict burnout. Following these parametric tests of these hypotheses, the most frequently reported stressors and naturally occurring coping strategies listed in response to probes were tallied.

## RESULTS

Raw score means, standard deviations, and correlations for the predictor and criterion variables are contained in Table 1. Regression analysis revealed that time on the job was not a significant prediction of burnout, *ns*. Consistent with expectations, PSC was significantly predictive of burnout at the second step of the equation,  $F_{inc}(1, 85) = 7.28$ ,  $R^2_{inc} = .08$ ,  $p < .01$ . Greater confidence in problem-solving ability was associated with less burnout regardless of time on the job. Tolerance, entered at the second step, was also significantly predictive of burnout,  $F_{inc}(1, 84) = 9.58$ ,  $R^2_{inc} = .09$ ,  $p < .01$ . Inability to tolerate stress was associated with greater burnout, consistent with the theoretical properties of this appraisal activity. Finally, the block of coping variables entered at the final step of the equation did not reach conventional levels of significance in the prediction of burnout,  $F_{inc}(2, 82) = 2.47$ ,  $R^2_{inc} = .05$ ,  $p = .09$ . However, inspection of the corresponding beta weights indicated that the lack of significance was due to the lack of effect for problem-focused coping ( $\beta = -.13$ ,  $t = -1.09$ , *ns*). Emotion-focused coping, however, was significantly associated with burnout,  $\beta = -.26$ ,  $t = -2.22$ ,  $p < .05$ . Consistent with prior research, increased emotion-focused coping was associated with higher levels of burnout. Thus, the situation-specific appraisals of stress tolerance and palliative coping efforts contributed to the prediction of burnout after taking the PSC into account. The final model accounted for 22% of the variance in burnout.

Table 1. Means, Standard Deviations and Correlations of Predictor and Criterion Variables

	1	2	3	4	5	<i>M</i>	<i>SD</i>
1. Burnout	--					2.85	1.02
2. PSC	-.28*	--				23.44	6.86
3. Tolerance	-.34*	.13	--			78.71	36.80
4. Problem focused coping	.06	-.26*	.05	--		1.37	1.18
5. Emotion focused coping	-.21	.15	-.07	-.53*	--	2.02	1.30
6. Time on the Job	.03	-.12	.14	.09	-.26*	77.40	72.90

Note. PSC = Problem Solving Confidence.

\* $p < .05$ .

### Post-Hoc Analyses

Analysis of the stress and coping measure allowed detection of intriguing patterns in the types of stressors and coping mechanisms reported by participants. Using categories identified by Gray-Toft and Anderson (1981) in their study of nurse stress, situations frequently endorsed as primary stressors in the present sample included *interpersonal conflicts on the unit* ( $n = 31$ ), *workload* (28), *lack of training and education* (15), *issues concerning patient education and treatment* (13), and *lack of institutional support* (11). Participant-generated coping responses were recoded to reflect the actual ecology in which the coping responses were made. A nonstandardized stress appraisal and coping assessment method would potentially obtain a valid indication of nurse coping efforts without entrapping or priming them in the a priori language of such instruments. Furthermore, participants were able to generate more than one response to the coping measure; therefore, the resulting categories were not mutually exclusive. As depicted in Table 2, the most frequently listed coping efforts included *seeking advice* ( $n = 31$ ), *taking time off from work* (27), *confronting the supervisor* (27), *using humor* (21), *rescheduling time at work* (18), *prioritizing work activities* (16), *confronting coworkers* (14), and *maintaining an optimistic attitude* (12).

Taking time off from work and increased confrontation have been typically construed as elements of occupational burnout, and many of the participants construed these as coping mechanisms at their disposal. A multiple response analysis (Norusis, 1993) was used to examine the nonmutually exclusive reporting of coping strategies (i.e., participants could generate more than one coping strategy). This enabled a cross-tabulation of the coping response categories with categories of nurses based on median splits of the burnout, tolerance, and problem-solving confidence variables. However, the nonmutually exclusive nature of the coping response categories precluded statistical tests of the relative proportions in each cell.

Table 2. Nurse Coping Strategies by Level of Occupational Burnout

	Low Burnout Nurses ( <i>n</i> = 38)	High Burnout Nurses ( <i>n</i> = 44)	Total Listings
Seek advice			
Number of nurses listing strategy	18	13	31
% of all nurses listing this strategy	58.1	41.9	
Within group % of responses*	24.7	13.0	
Take time off of work			
Number of nurses listing strategy	11	16	27
% of all nurses listing this strategy	40.7	59.3	
Within group % of responses	15.1	16.0	
Confronted supervisor			
Number of nurses listing strategy	9	18	27
% of all nurses listing this strategy	33.3	66.7	
Within group % of responses	12.3	18.0	
Used humor			
Number of nurses listing strategy	6	15	21
% of all nurses listing this strategy	28.6	71.4	
Within group % of responses	8.2	15.0	
Rescheduled time at work			
Number of nurses listing strategy	6	12	18
% of all nurses listing this strategy	33.3	66.7	
Within group % of responses	8.2	12.0	
Prioritized work activities			
Number of nurses listing strategy	5	11	16
% of all nurses listing this strategy	31.3	68.8	
Within group % of responses	6.8	11.0	
Confronted co-worker			
Number of nurses listing strategy	9	5	14
% of all nurses listing this strategy	64.3	35.7	
Within group % of responses	12.3	5.0	
Maintain optimistic attitude			
Number of nurses listing strategy	6	6	12
% of all nurses listing this strategy	50	50	
Within group % of responses	8.2	6.0	
Use relaxation strategy			
Number of nurses listing strategy	3	4	7
% of all nurses listing this strategy	42.9	57.1	
Within group % of responses	4.1	4.0	
Total number of coping strategies			
Generated	73	100	

*Note.* Total number of Nurses = 82

\*Within group percentages reflect the proportion of strategies generated by nurses within the respective burnout group (e.g., the 18 responses for seeking advice among low burnout nurses represents 24.7% of all coping strategies listed by low burnout nurses).

As depicted in Table 2, nurses that scored above the median on the burnout measure generated more coping strategies than low burnout nurses, generally. High burnout nurses reported more strategies involving the use of humor on the job (71.4 % vs. 28.6%), prioritizing their work schedules (69%), confronting their supervisors (67%), and taking time off from work (59%) than nurses scoring below the median on the burnout variable. Nurses with greater burnout generated fewer strategies in which they would seek advice (42%) or confront their coworkers (36%) than those with lower burnout scores. Moreover, among 161 nurses with higher burnout scores, (18 of the 44) listed coping strategies that involved confronting a supervisor, 36% listed taking time off from work, and 34% listed the use of humor. In contrast, 47% of the nurses with low burnout (18 out of 38) listed coping strategies categorized as advice seeking and 29% listed taking time off from work.

Nurses who were intolerant of work stress (again defined by a median split) generated more coping strategies that involved confrontations with a supervisor (74.1%) and rescheduling their work (61.1%) than nurses reporting a greater sense of tolerance (see Table 3). Nurses who reported a greater sense of tolerance generated more strategies that reflected an optimistic attitude (67%), advice seeking (65%), and prioritizing their work activities (63%) than nurses reporting less tolerance. Moreover, among the low-tolerance nurses confronting a supervisor was the most frequently used coping strategy, as was taking time off from work and using humor.

Only one substantive difference was apparent among participants on the problem-solving confidence variable. Nurses with a greater confidence in their problem-solving abilities listed rescheduling their work (72.2%) more than nurses with less confidence.

## DISCUSSION

These results provide an engaging view of the theoretical and clinical dynamics that characterize occupational burnout among nurses in rehabilitation settings. Consistent with current models of problem solving, greater confidence in one's ability to handle everyday problems was associated with less burnout. Moreover, situation-specific appraisals of tolerance accounted for a significant degree of variance above and beyond problem-solving confidence. Finally, emotion-focused coping was associated with higher burnout scores at the final step of the predictive equation. These findings indicate that situation-specific appraisal and coping activities account for a unique degree of variance in burnout after taking into account an individual difference construct, as described in transactional models of stress appraisal and coping in the workplace (Dawis & Lofquist, 1984; Lazarus, 1991).

Many nurses in this study reported a high degree of confidence in their problem-solving ability, and a transformation of the variable was necessary in order to achieve a normal distribution for analysis. The issue of "overestimat-

**Table 3. Nurse Coping Strategies by Level of Tolerance for Stress**

	Low Tolerance Nurses ( <i>n</i> = 40)	High Tolerance Nurses ( <i>n</i> = 42)	Total <i>N</i> of Nurses
<b>Seek advice</b>			
Number of nurses listing strategy	11	20	31
% of all nurses listing this strategy	35.5	64.5	
Within group % of responses*	12.4	23.8	
<b>Take time off of work</b>			
Number of nurses listing strategy	12	15	27
% of all nurses listing this strategy	44.4	55.6	
Within group % of responses	13.5	17.9	
<b>Confronted supervisor</b>			
Number of nurses listing strategy	20	7	27
% of all nurses listing this strategy	74.1	25.9	
Within group % of responses	22.5	8.3	
<b>Used humor</b>			
Number of nurses listing strategy	12	9	18
% of all nurses listing this strategy	57.1	42.9	
Within group % of responses	13.5	10.7	
<b>Rescheduled time at work</b>			
Number of nurses listing strategy	11	7	18
% of all nurses listing this strategy	61.1	38.9	
Within group % of responses	12.4	8.3	
<b>Prioritized work activities</b>			
Number of nurses listing strategy	6	10	16
% of all nurses listing this strategy	37.5	62.5	
Within group % of responses	6.7	11.9	
<b>Confronted co-worker</b>			
Number of nurses listing strategy	8	6	14
% of all nurses listing this strategy	57.1	42.9	
Within group % of responses	9.0	7.1	
<b>Maintain optimistic attitude</b>			
Number of nurses listing strategy	4	8	12
% of all nurses listing this strategy	33.3	66.7	
Within group % of responses	4.5	9.5	
<b>Use relaxation strategy</b>			
Number of nurses listing strategy	5	2	7
% of all nurses listing this strategy	71.4	28.6	
Within group % of responses	5.6	2.4	
<b>Total number of coping strategies</b>			
Generated	89	84	

\*Within group percentages reflect the proportion of strategies generated by nurses within the respective tolerance groups. (e.g., the 11 responses for the Seek Advice coping category represents 12.4% of all coping strategies listed by low tolerance nurses).

ing" one's problem-solving ability has been observed in prior research (cf. Larson & Heppner, 1989). Some nurses may have "overreported" rather than "overestimated" their sense of efficacy in solving problems. Once a normal distribution was achieved, the expected relation between problem-solving confidence and burnout was observed. Nurses perform in an environment in which a strong sense of confidence may be expected, cultivated, and reinforced, and for some this could have translated into a positive response bias on the Problem Solving Inventory. A positive response bias might be characteristic of the environmental demands and expectations of this particular occupational group. Among some occupational groups, an air of confidence may be crucial to performance in day-to-day demands. These issues are not well understood in the problem-solving literature, and it may be necessary to explore other possible corrective procedures for research and applied purposes.

Effective problem-solving confidence has been linked with a greater proclivity for positive mood and pleasant engagements with the environment in previous studies (Elliott, Herrick et al., 1994; Elliott et al., 1995). Problem-solving confidence might exert a beneficial influence by promoting a buoyant sense of self, a set of positive expectancies, a greater proclivity for positive mood in routine and stressful situations, and by insulating a person from possible negative connotations about the self while facing the grueling demands of daily job performance. These behaviors are characteristic of individuals who are able to maintain a positive set of beliefs that foster an optimal level of emotional well-being in face of vocational (Chwalisz et al., 1992; Sherwin et al., 1992) and life stress (Taylor & Brown, 1988).

The present study also revealed that individuals with higher burnout scores can be distinguished by their difficulties in tolerating stress on the job and their use of emotion-focused coping strategies. Burned-out employees are prone to rely on palliative coping efforts at work, presumably to deal with the emotional concomitants of work-related stress (Chwalisz et al., 1992; Ogus, 1992; Thorton, 1992). Nurses with greater burnout are more likely to focus on themselves in stressful interpersonal situations at work (Marmarosh et al., 1995); the present data reveal a similar tendency to be preoccupied with relieving the negative emotional consequences of job stress. Occupational burnout seems to increase an employee's self-focus to the extent that the burned-out employee may have difficulty appreciating or generating alternative — and perhaps more instrumental — options for coping.

Exploratory analyses of coping efforts revealed several nuances about the burnout-coping relation. Prior research has found burnout to be associated with days off from work and absenteeism (Firth & Britton, 1989). Often absenteeism has been considered a symptom of burnout and job stress (Ross & Altmaier, 1994). Others have extolled "taking time off from work" as an adaptive coping strategy to gain distance from work stress and assist in arranging personal priorities to *prevent* burnout (Pines & Aronson, 1988, pp. 151-152). However, absenteeism of this sort could reduce motivation and

complicate existing problems in the workplace (Ross & Altmaier, 1994). This phenomenological approach suggests that nurses with higher burnout are more inclined than other nurses to see time off from work as a reasonable and viable option for coping with job stress. Absenteeism may not necessarily reflect a "symptom" *per se*; rather, it may reflect a somewhat circumscribed coping repertoire. It may be more useful to reconsider the phenomenological, subjective perspective of the employee in order to prescribe more meaningful, instrumental alternatives for coping with job demands.

Unique to the present study was the pronounced contribution of tolerance appraisals to the prediction of burnout. According to the Minnesota Theory of Work Adjustment, individuals who have difficulty tolerating the discordance between their expectations for work and the actual demands of the job will be more likely to fatigue, be dissatisfied with their work, withdraw from others, take aggressive actions toward others and the environment, and eventually leave the position (Dawis & Lofquist, 1984, pp. 118-120). Results from post-hoc analysis of coping responses generated in response to the thought-listing probe partially support this position: Intolerant nurses were more likely to confront supervisors under stress. Nurses with a greater tolerance for stress generated more strategies of advice seeking, being optimistic, and prioritizing.

Interestingly, nurses with higher burnout scores reported a greater willingness to use humor as a coping device than nonburned-out nurses. Although cross-sectional and experimental studies with undergraduate samples indicate that humor can potentially buffer one from the deleterious effects of life stress (Nezu, Nezu, & Blissett, 1988; Porterfield, 1987), field research has failed to find a buffering effect among nurses (DesCamp & Thomas, 1993). Humor is often recommended as an option for coping with burnout (e.g., Pines & Aronson, 1988), but the present data imply that the effects may be strictly palliative. Joking and making light of situations in the workplace may "distance" oneself from the stressful aspects of the job, or from others in the environment (Duncan, 1985; Kuhlman, 1988). As such, humor may be an extension of the depersonalization process that can accompany occupational burnout (Maslach & Jackson, 1982). These issues warrant further study among persons in high-burnout situations.

Interpersonal conflict on the job was the most frequently reported stressor among these participants. Interpersonal difficulties are known to be a source of staff stress in rehabilitation, but research to date has focused on strained patient-staff interactions (e.g., Dunn, Umlauf, & Mermis, 1992). The present study clearly indicates that conflict between staff is a source of considerable stress in rehabilitation, and it merits more attention from those invested in the psychosocial aspects of rehabilitation. It is possible that those with fewer social cognitive resources for appraising stress and under duress may feel a more pronounced lack of support and greater frustration in meeting job demands, and subsequently shift the emotional burden of their plight onto colleagues. In the process, attempts to ameliorate work stress may inadvertently exacerbate it.

Interpersonal confrontations have been espoused as effective, direct ways to address the inequities of work or the lack of collegial support (Pines & Aronson, 1989). Support from relationships that potentially offer guidance and direction has been identified as a salient feature in the prediction of burnout (Ross, Altmaier, & Russell, 1989; Russell, Altmaier, & Van Velzen, 1987). Our data are limited in that the relative efficacy of these techniques could not be determined, but it is noteworthy that these strategies were spontaneously offered as coping mechanisms by those with corresponding problems tolerating stress and with higher levels of occupational burnout. Tolerant nurses and those with lower levels of burnout, in contrast, were more apt to seek advice from their colleagues.

The results of the present study have several implications for psychological interventions with staff. Effective interventions with rehabilitation staff should address the appraisal of stressors on the job and offer alternative means of coping with interpersonal conflicts and workload issues, specifically. Clinicians can implement problem-solving strategies and self-management techniques in training programs with nursing staff to enhance the acquisition of specific stress-reducing coping skills and to aid in emotional regulation when problem solving. Generally, problem-solving training has emphasized skill-building in five broad areas of problem solving: (a) problem-solving orientation, (b) problem definition and formulation, (c) generation of alternatives and solutions, (d) decision making and evaluation of possible solutions, and (e) implementation and verification of solutions (Nezu & D'Zurilla, 1989). The problem-solving orientation component incorporates skills to ward off negative affect, maintain favorable opinions about one's abilities, and enhance motivation for solving other problems that require more cognitive-behavioral skills and goal-directed efforts (Nezu & D'Zurilla, 1989). Clinicians can enhance a client's problem-solving orientation by teaching effective skills in regulating and monitoring emotional experiences when solving problems, generally, and when coping with certain stressors and hassles at work, specifically. In this process, staff may be taught to inhibit impulsive, unplanned attempts to solve problems on the job, and to value and engage in more thoughtful, planful, and goal-oriented efforts. These skills may reinforce favorable opinions about the self and stave off prolonged experiences of negative emotions that might impair or inhibit effective problem solving (Nezu & D'Zurilla, 1989).

Training in the problem orientation stage can also include other techniques commonly used in behavioral health interventions. For example, staff may be taught the utility of emotion-focused strategies that augment self-regulation under stressful circumstances (e.g., imagery, relaxation exercises, etc.). Strategies that assist staff in regulating emotional experiences are particularly recommended when a person is facing situations and conditions that are of brief duration, and when the person has little actual control over the situation (Auerbach, 1989). Additionally, evidence suggests that increased positive affect can have a beneficial effect on clinical problem solving, increasing the

flexibility in judgment and the integration of information among advanced medical students (Isen, Rosenzweig, & Young, 1991). Such techniques can then be employed in effective conflict management and assertion skills training. Thus, combined training in a positive problem-solving orientation and in actual problem-solving techniques may be most helpful in promoting effective coping and personal tolerance among rehabilitation staff.

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