

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/8606754>

# Job Stress, Job Performance, and Social Support Among Hospital Nurses

Article in *Journal of Nursing Scholarship* · February 2004

DOI: 10.1111/j.1547-5069.2004.04016.x · Source: PubMed

---

CITATIONS

208

---

READS

5,226

1 author:



**Raeda Fawzi Abualrub**

Jordan University of Science and Technology

30 PUBLICATIONS 654 CITATIONS

SEE PROFILE

All content following this page was uploaded by [Raeda Fawzi Abualrub](#) on 11 November 2014.

The user has requested enhancement of the downloaded file. All in-text references [underlined in blue](#) are added to the original document and are linked to publications on ResearchGate, letting you access and read them immediately.

# Job Stress, Job Performance, and Social Support Among Hospital Nurses

Raeda Fawzi AbuAlRub

**Purpose:** To investigate (a) the effect of job-related stress on job performance among hospital nurses, and (b) the effect of social support from coworkers on the stress-performance relationship.

**Design:** A correlational descriptive survey was used to investigate these relationships among a convenience sample of 263 American hospital nurses and 40 non-American nurses who were accessible via the Internet.

**Methods:** Data were collected using a Web-based structured questionnaire, which included the Nursing Stress Scale, the Schwirian Six Dimension Scale of Nursing Performance, the McCain and Marklin Social Integration Scale, and the demographic form. Descriptive statistics, Pearson product-moment correlations, and hierarchical regression techniques were used to analyze the data.

**Findings:** Perceived social support from coworkers enhanced the level of reported job performance and decreased the level of reported job stress. The analysis also indicated a curvilinear (U-shaped) relationship between job stress and job performance; nurses who reported moderate levels of job stress believed that they performed their jobs less well than did those who reported low or high levels of job stress.

**Conclusions:** Results indicated the importance of social support from coworkers, as well as the need for further research to test the U-shaped relationship between job stress and job performance.

JOURNAL OF NURSING SCHOLARSHIP, 2004; 36:1, 73-78. ©2004 SIGMA THETA TAU INTERNATIONAL.

[Key words: job stress, job performance, social support, Web-based survey]

\* \* \*

Stress is a contributing factor to organizational inefficiency, high staff turnover, absenteeism because of sickness, decreased quality and quantity of care, increased costs of health care, and decreased job satisfaction (Wheeler & Riding, 1994). A survey by Northwestern National Life indicated that 40% of American workers perceived their jobs as extremely stressful (U.S. Department of Health and Human Services, 1999). The estimated cost of stress-related illnesses in U.S. industry was reported in 1995 as approximately \$13,000 per employee in any profession per year (Bruhn, Chesney, & Salcido, 1995). The cost associated with problems of work stress is a cause for concern (Cooper, Liukkonen, & Cartwright, 1996).

People with different jobs encounter different types and different quantities of stress. Selye (1976) indicated that nursing is one of the most stressful professions. He pointed out the necessity of considering and investigating occupational stress in nursing, because performance declines under stressful situations. Few researchers have investigated the relationship between occupational stress and job perfor-

mance. Different results have been reported such as: high job stress leads to low job performance (Jamal, 1984; Leveck & Jones, 1996; Motowidlo, Manning, & Packard, 1986; Westman & Eden, 1996), high job stress leads to high job performance (Keijsers, Schaufeli, Le Blanc, Zwerts, & Miranda, 1995), and people with moderate stress perform better than do those with high or low levels of stress (Anderson, 1976; Cohen, 1980). Researchers using measures that are sensitive to the nurse population are needed to understand the relationship between job stress and performance among nurses. Such research is needed now more

**Raeda Fawzi AbuAlRub**, RN, PhD, *Gamma*, College of Nursing, Jordan University of Science and Technology, Irbid, Jordan. The author thanks Dr. Joanne McCloskey Dochterman for her input and guidance throughout the study and the preparation of the manuscript, the nurses who provided information necessary for the completion of the study, and Sigma Theta Tau International, *Gamma* Chapter, for partial funding of the study. Correspondence to Dr. AbuAlRub, P.O. Box 1894, Irbid, Jordan. E-mail: raeda71@yahoo.com

Accepted for publication May 6, 2003.

than ever because of the rapid changes and the complex technology characteristic of the American health care system.

Few studies have shown variables that might reduce or buffer the negative effects of stress. Social support is one of those variables. Social support among nurses needs further investigation to better understand if it has only a direct effect on job stress or job performance, or if it buffers the effect of stress on job performance. Research that could demonstrate the moderating effect (buffering) of social support on the stress-performance relationship is important to verify the significance of using sources of social support in the workplace for highly stressed employees. On the other hand, if research shows the direct effect of social support on job performance, sources of support in the workplace become significant for all employees. By understanding the effect of stress on job performance and the effect of social support on both job stress and job performance, better stress management approaches incorporating social support systems can be established. As a result, the quality of care might be improved when provided by nurses with strong social support. Providing environments with enhanced levels of social support and reduced levels of stress might help to retain staff and thus alleviate the nursing shortage.

Thus, the purpose of this study was to investigate the effect of perceived job-related stress on job performance among hospital nurses, and to investigate the effect of social support from coworkers on job stress, job performance, and the stress-performance relationship. The following hypotheses were tested: (a) hospital nurses with high social support from coworkers have low perceived job stress; (b) nurses with high perceived job stress have low job performance; and (c) nurses with high social support from coworkers have high job performance; and (d) as perceived job stress increases, nurses with high social support from coworkers will perform better than will nurses with less support.

## Background

Varied results have been reported in regard to the relationship between job stress and job performance. [Westman and Eden \(1996\)](#) used a correlational design to investigate the relationship between stress resulting from excessive demands and performance among cadets. Their findings indicated a negative linear relationship between stress and job performance; that is, as job stress increased, job performance decreased. [Jamal \(1984\)](#), [Leveck and Jones \(1996\)](#), and [Motowidlo and colleagues \(1986\)](#), using correlational designs, also found that high job stress among nurses correlated with low job performance. [Keijser and colleagues \(1995\)](#) found a positive relationship; as stress (burnout) among nurses working in ICUs increased, so did objective job performance. On the other hand, [Anderson \(1976\)](#) found that perceived stress had an inverted U-shaped relationship with job performance among 93 owner-managers of small businesses; that is, participants with a moderate level of job stress performed better than did those with either a low or a high level of job stress. Such a relationship

(inverted U-shaped) was also indicated in laboratory studies of the stress-performance relationship ([Cohen, 1980](#)).

In regard to the moderating or buffering variables of the effects of job stress, literature shows that emotional social support has been associated negatively with burnout, despite the different instruments used to measure social support. Social support from colleagues and superiors reduced burnout, a result of chronic occupational stress, among nurses ([Constable & Russell, 1986](#); [Dick, 1986](#); [Hare, Pratt, & Anderaws, 1988](#); [Paredes, 1982](#)). [Kippling \(1998\)](#) found that 447 mental health nurses identified social support as the most frequently used strategy to cope with stress. But some studies have shown a positive relationship between social support and burnout ([Patenauder-Jones, 1988](#); [Skiles & Hinson, 1989](#)). [Constable and Russell \(1986\)](#) and [Paredes \(1982\)](#) found that supervisory support was more effective in reducing stress than was coworker support. [LaRocco, House, and French \(1980\)](#) found that social support from coworkers was an important way to reduce stress.

Only one study was found of the relationship between social support and job performance among nurses. [Fong \(1992\)](#) explored the factors associated with peak performance among eight nurse educators. One of the findings indicated that peak performers tended to have more support in the workplace.

The moderating role of social support on the stress-performance relationship has rarely been reported. In a study to test a model of work stress, job performance, mood, and moderator variables, [Stewart and Barling \(1996\)](#) examined the effect of social support on the stress-performance relationship among 71 participants (17 physicians, 27 nurses, and 27 technologists). In their 20-day study, participants completed daily questionnaires about stressors, job performance, and mood. Possible moderating variables were measured once at the beginning of the study. The findings showed that only increased informational social support reduced the negative effects of stress on job performance.

The literature shows inconsistent results in regard to the relationship between job stress and job performance. Although several researchers have investigated the effects of social support on job stress, none has reported the effect of social support on job performance among hospital nurses, and only one study was found on the buffering effect of social support on the relationship between job stress and job performance among hospital nurses.

## Methods

### Sample and Data Collection

The convenience sample consisted of hospital staff nurses who were accessible over the Internet. The researcher subscribed to a variety of listserves to compile a list of nurses' names and their E-mail addresses. A total of 3,050 E-mail addresses were collected. From this list of possible participants, nurses who currently were working as hospital staff nurses and those who had worked as staff nurses for at least

6 months in the last 3 years were eligible to participate in the study. After approval by the institutional review board, those 3,050 nurses were invited individually to participate in the study. Fifty-one participants replied that they did not meet the inclusion criteria for participating in the study. Four hundred ninety letters were returned because of failed delivery. Thus, the total number of initial contacts was 2,509. Nurses who agreed to participate were instructed to complete the questionnaire and to send it electronically to the researcher. Of the 303 participants who submitted complete and usable questionnaires, 263 were from the US and 40 were from Britain, Canada, and other countries. Data were collected between January 3, 2002 and March 12, 2002.

The majority of the American participants ( $n = 149$ ; 56.7%) had associate degrees, 89 had diplomas (33.8%), and 25 had baccalaureate degrees (9.5%). The mean age was 42.4 years, with a range from 19 years to 64 years. Most were women (89.4%) and were married (70.0%). One hundred fifty three had nursing experience of more than 15 years (58.2%), and 176 had RN experience of more than 10 years (66.9%). Two hundred and four nurses were currently staff nurses (77.6%). Half worked the day shift ( $n = 132$ , 50.2%). Participants worked in a variety of units such as emergency departments (15.2%), intensive care units (17.1%), medical-surgical units (11.8%), obstetrics-gynecology units (11.8%), operating room (14.1%), pediatrics (4.9%), psychiatry (2.7%), and others (22.4%) such as bone marrow transplantation and cardiopulmonary telemetry units.

Nurses from countries other than the US were similar in the means and standard deviations of the demographic variables and were all categorized as non-American nurses. The majority of the non-American nurses ( $n = 19$ ) had associate degrees (47.5%), 15 had diplomas (37.5%), and 6 had baccalaureate degrees (15.0%). The mean age was 39.5 years with a range from 23 to 58 years. Most were women (77.5%) and were married (77.5%). Seventeen had nursing experience of more than 15 years (42.5%), and 62 had nursing experience of between 6 and 15 years (62.5%). Twenty-eight nurses were currently staff nurses (70.0%). Fourteen nurses worked the day shift (35%). They also worked in a variety of units such as emergency departments (5%), intensive care units (10%), psychiatric units (25%), obstetrics-gynecology units (2.5%), operating rooms (20%), pediatrics units (15%), medical-surgical units (2.5%), renal units (10%), and others (10%) such as burn and oncology units.

### Instruments

Data were collected using an electronic structured questionnaire that included an explanation of the purpose and procedures of the study, the Nursing Stress Scale (Gray-Toft & Anderson, 1981), the Schwirian Six Dimension Scale of Nursing Performance (Schwirian, 1978), the McCain and Marklin Social Integration Scale (McCloskey, 1990), and the demographic form.

Job-related stress, defined as any work situation perceived by the participant as threatening because of the mismatch between the situation's demands and the individual's coping abilities, was measured with the 34-item Nursing Stress Scale (NSS; Gray-Toft & Anderson, 1981). Because stressors related to patients and families are not included in the NSS but are considered among the stressors that nurses experience (Hartrick & Hills, 1993), the eight items of the subscale on patients and families of the Expanded Nursing Stress Scale (ENSS; French, Lenton, Walters, & Eyles, 2000) were added to the NSS. In this study, the alpha coefficient for the whole scale was .92. It was .76 for the "death and dying" subscale, .70 for "conflicts with physicians," .73 for "inadequate preparation," .71 for "lack of support," .70 for "conflicts with other nurses," .79 for "work load," .76 for "uncertainty concerning treatment," and .87 for "patients and families."

Job performance, defined as the effectiveness of the person in carrying out his or her roles and responsibilities related to direct patient care, was measured with the Schwirian Six Dimension Scale of Nursing Performance (Schwirian, 1978). This measure consists of 52 items on a 4-point scale (1 = not very well, 4 = very well). Although the scale was developed in 1978, recent use has consistently shown high reliability coefficients (Failla, Maher, & Duffy, 1999). In this study, the alpha coefficient for the whole scale was .95. It was .65 for the "leadership" subscale, .83 for "teaching and collaboration," .85 for "planning and evaluation," .84 for "interpersonal relations and communications," .80 for "professional development," and .73 for "critical care."

Social support, defined as the product of interpersonal work relationships that has the feasibility to promote the well-being or coping abilities of the recipient (Cohen, 1988; Hobfoll & Vaux, 1993), was measured with the McCain and Marklin Social Integration Scale. The scale contains eight items to measure social support the employee gets from coworkers on a 5-point scale (1 = strongly disagree, 5 = strongly agree; McCloskey, 1990). The alpha coefficient for the scale was .70.

## Results

Hypothesis 1, that hospital nurses with high social support from coworkers have low perceived job stress, was addressed by the use of bivariate Pearson-product moment correlation. Correlations among variables of the study for the whole sample and separately for the American and non-American nurses are shown in Table 1. The correlation between job stress and social support from coworkers for the whole sample was negative ( $r = -.10$ ,  $p < .01$ ); that is, participants who perceived having more social support from coworkers reported experiencing less job stress.

When omitting the "death and dying" subscale from the job stress instrument, the correlations between job stress and social support from coworkers increased ( $r = -.14$ ,  $p < .05$ ). The reason for analyzing the correlations without the

**Table 1. Correlations Between Job Stress, Social Support from Coworkers, and Job Performance**

	Job performance	Coworker support
<b>Sample (N = 303)</b>		
Job stress	-.07	-.10*
Job stress <sup>a</sup>	-.09	-.14*
Job performance		.23**
Coworkers support		
<b>American nurses (n = 263)</b>		
Job stress	-.07	-.10
Job stress <sup>a</sup>	-.09	-.13*
Job performance		.20**
Coworkers support		
<b>Non-American nurses (n = 40)</b>		
Job stress	-.02	-.12
Job stress <sup>a</sup>	-.10	-.22
Job performance		.48**
Coworkers support		

Note. <sup>a</sup>Job stress: the rating of job stress without including the death and dying subscale. \* $p < .05$ . \*\* $p < .01$ .

“death and dying” subscale was that a large percentage of the participants did not work in intensive care units and thus might not have experienced those stressors often. The correlations between job stress and job performance as well as between social support from coworkers and job performance are also presented (see Table 1). The results were not significantly different for the American and non-American participants.

Hypothesis 2, that nurses with high perceived job stress have low job performance; Hypothesis 3, that nurses with high social support from coworkers have high job performance; and Hypothesis 4, that as perceived job stress in-

creases, nurses with high social support from coworkers will perform better than will nurses with less support, were tested by hierarchical regression analysis. Variables were entered in order based on theory regarding their correlation with job performance.

First, the background variables, age, sex, marital status, education, nursing experience, RN experience, unit, type of care model, shift, time commitment, average number of patients cared for, number of friends at work, and number of children at home were entered. This procedure was used to control for effects on job performance. These variables explained 14% of the variation in job performance. The summary of the hierarchical regression analysis is presented in Table 2.

For the second step, job stress was added to the regression equation, and it did not add any net change to the level of variance explained by the background variables. The association between job stress and job performance was negative but not significant ( $r = -.10$ ,  $p = .096$ ). That result led to the third step of the hierarchical regression in which the squared term of the job stress variable was entered into the regression equation to further explore the presence of a nonlinear relationship between job stress and job performance. The presence of a nonlinear relationship between job stress and job performance was a possibility, especially because reports in the literature have indicated that job stress had an inverted U-shaped relationship with job performance (Anderson, 1976; Cohen, 1980). The third step showed that 2% was the net change that was added to the cumulative  $R^2$  when the squared term of the job stress variable was added to the regression equation. This step showed that job stress was negatively associated with job performance at  $p < .05$ , and that the squared term of job stress was positively associated with job performance at  $p < .05$ , indicating a U-shaped relationship between job stress and job performance. That is, nurses with moderate levels of job-related stress reported

**Table 2. Summary of the Hierarchical Regression Analysis for Variables Predicting Job Performance (N = 303)**

Variables set	Std B Step 1	Std B Step 2	Std B Step 3	Std B Step 4	Std B Step 5	$R^2$ Accumulative	$R^2$ Increment
<b>1. Background Variables</b>						.14	.14
Age	-.12	-.13*	-.13*	-.15*	-.15*		
Sex (female)	.08	.08	.08	.06	.6		
Marital status (married)	.03	.03	.02	.02	.02		
Education (associate degree)	.00	.00	-.01	.01	.02		
Nursing experience	.22	.23	.25	.24	.24		
RN experience	.09	.08	.06	.07	.07		
Unit (emergency)	-.12*	-.14*	-.13*	-.13*	-.13*		
Shift (day)	.06	.05	.04	.05	.05		
Number of children at home	-.11*	-.11*	-.10	-.10	-.10		
<b>2. Job stress</b>		-.10	-.10*	-1.30**	-1.45**	.14	.00
<b>3. Squared term of job stress</b>			.01*	1.22*	1.17*	.16	.02
<b>4. Support from coworkers</b>				.17*	-.004	.19	.03
<b>5. Stress*coworkers support</b>					.27	.20	.01

Note. \* $p < .05$ . \*\* $p < .01$ .



performing less well than did nurses with either low or high job stress. Further analysis showed that the net increase in  $R^2$  when the squared term of job stress was entered into the regression equation was significant at  $p = .01$ .

The fourth step, in which the variable of social support from coworkers was added to the regression formula, showed that 3% was the net change in the cumulative  $R^2$  (19%). It showed that perceived social support from coworkers enhanced the perceived level of job performance ( $r = .17, p < .01$ ). Further analysis showed that the net increase in  $R^2$  when social support from coworkers was entered into the regression equation was significant at  $p = .01$ .

The fifth step, in which the product or multiplicative term of social support from coworkers and stress was added to the regression formula to examine the buffering effect of social support from coworkers on the stress-performance relationship, showed a 1% net change in the cumulative  $R^2$  (20%). Further analysis showed that the net increase in  $R^2$  when the product term of social support from coworkers and stress was entered into the regression equation was insignificant.

Overall, the final model from the hierarchical regression analyses showed that 20% of the variation in job performance was explained by the background variables, job stress, the squared term of job stress, social support from coworkers, the interaction between job stress and social support from coworkers. To examine how much of the variation in job performance could be explained merely by the variables of job stress and social support from coworkers, another regression was done with background variables entered as the last step. These results were not significantly different from the analysis in which the background variables were entered first.

Concerning the background variables, the final step showed that the perceived performance of staff nurses who were older and worked in the emergency department was lower than it was among nurses who were younger and worked in other units. Working in the emergency department had a significant association with job performance in all five steps. To examine which of the background variables most accounted for the 14% of the variation in job performance, all background variables were entered as independent variables using a stepwise regression procedure. The results showed two significant models. The first model showed that nursing experience explained 7% of the variation in job performance, and the second model showed that both nursing experience and working in the emergency department explained 10% of the variation in job performance.

## Discussion

The findings of this study supported Hypothesis 1. Such a finding is congruent with the results of Constable and Russule (1986), LaRacco and colleagues (1981) and Paredes (1982). Nurse administrators and nurse man-

agers should be aware of the significance of social support in the workplace and should set examples so that coworkers' support can also be characteristic in the work place.

Hypothesis 2 was not supported. The explained variance in job performance by the U-shaped relationship between stress and performance was only 2%, and further testing of such a relationship is warranted before considering any implications.

Hypothesis 3 was supported. A logical interpretation would be that nurses who believe that they are supported by their colleagues (a) like their work environment and thus excel in their work and perform better than do those with less support; and (b) feel comfortable asking for help from their coworkers in regard to certain unclear nursing tasks, thus decreasing error and enhancing performance.

Hypothesis 4 was not supported. Only one study was found indicating that increased informational social support reduced the negative effect of job stress on job performance among nurses (Stewart & Barling, 1996). Further research is needed.

The final step of hierarchical regression analysis showed that the background variables, job stress, social support from coworkers, and the interaction between job stress and social support explained 20% of the variation in job performance. The reason that only 20% of the variation in job performance was explained by the included variables might be because job stress, social support, and job performance were measured subjectively, and individual perceptions regarding the same level might vary.

This study indicates the importance of adopting strategies to demonstrate more social support for nurses in the workplace. Nurse managers should promote an organizational culture characterized by cooperation, social integration, and teamwork among nurses. Moreover, fostering cooperation, social interaction concepts, and effective coping mechanisms among nursing students might be important for future behaviors. Students who learn the importance of cooperation and social integration during their education might better understand the significance of coworker support in the work place.

## Conclusions

The results of this study indicate the importance of social support from coworkers. The positive effect of social support on job performance could help in enhancing the quality of care. Moreover, working in an environment with an enhanced level of social support and a decreased level of stress results in higher rates of nurse retention.

Using a Web-based survey to collect the data provided only a convenience sample, which limits the generalization of the results. Other limitations of using Web-based research are multiple completion of the survey and the difficulty of computing the response rate.

## References

- Anderson, C. (1976). Coping behaviors as intervening mechanisms in the inverted-U stress-performance relationship. *Journal of Applied Psychology*, 54, 462-469.
- Bruhn, J., Chesney, A., & Salcido, R. (1995). Health and organizational issues in managing a multicultural work force. *Family and Community Health*, 18, 1-8.
- Cohen, S. (1980). Aftereffects of stress on human performance and social behavior: A review of research and theory. *Psychological Bulletin*, 88, 82-108.
- Cohen, S. (1988). Psychosocial models of the role of social support in the etiology of physical disease. *Health Psychology*, 7, 269-297.
- Constable, J., & Russell, D. (1986). The effects of social support and the work environment upon burnout among nurses. *Journal of Human Stress*, 12, 20-26.
- Cooper, C., Liukkonen, P., & Cartwright, S. (1996). Stress prevention in the workplace: Assessing the costs and benefits to organizations. Luxembourg: Office for Official Publications of the European Communities.
- Dick, M. (1986). Burnout in nurse faculty: Relationship with management style, collegial support, and workload in collegiate programs. *Journal of Professional Nursing*, 2, 252-260.
- Failla, S., Maher, M., & Duffy, C. (1999). Evaluation of graduates of an associate degree nursing program. *Journal of Nursing Education*, 38, 66-67.
- Fong, C. (1992). A model for peak performance. *Nurse Educator*, 17, 15-18.
- French, S., Lenton, R., Walters, V., & Eyles, J. (2000). An empirical evaluation of an expanded nursing stress scale. *Journal of Nursing Measurement*, 8(2), 161-178.
- Gray-Toft, P., & Anderson, J. (1981). The Nursing Stress Scale: Development of an instrument. *Journal of Behavioral Assessment*, 3, 11-23.
- Hare, J., Pratt, C., & Anderaw, D. (1988). Predictors of burnout in professional and paraprofessional nurses working in hospitals and nursing homes. *International Journal of Nursing*, 25, 105-115.
- Hartrick, G., & Hills, M. (1993). Staff nurse perceptions of stressors and support needs in their workplace. *The Canadian Journal of Nursing Research*, 25, 23-30.
- Hobfoll, S., & Vaux, A. (1993). Social support: Social resources and social context. In L. Goldberger & S. Breznitz (Eds.), *Handbook of stress: Theoretical and clinical aspects* (2nd ed., pp. 685-705). New York: Free Press.
- Jamal, M. (1984). Job stress and job performance controversy: An empirical assessment. *Organizational Behavior and Human Performance*, 44, 601-619.
- Keijsers, G., Schaufeli, W., Le Blanc, P., Zwerts, C., & Miranda, D. (1995). Performance and burnout in intensive care units. *Work and Stress*, 9, 513-527.
- Kippling, C. (1998). Mental health nurses' strategies for coping with stress. *Mental Health Nursing*, 17, 18-22.
- LaRocco, J., House, J., & French, J. (1980). Social support, occupational stress, and health. *Journal of health and Social Behavior*, 21, 202-218.
- Leveck, M., & Jones, C. (1996). The nursing practice environment, staff retention, and quality of care. *Research in Nursing and Health*, 19, 331-343.
- McCloskey, J. (1990). Two requirements for job contentment: Autonomy and social integration. *Journal of Nursing Scholarship*, 22(3), 140-143.
- Motowidlo, S., Manning, M., & Packard, J. (1986). Occupational stress: Its causes and consequences for job performance. *Journal of Applied Psychology*, 71, 618-629.
- Paredes, F. (1982). The relationship of psychological resources and social support to occupational stress and burnout in hospital nurses. Unpublished doctoral dissertation. University of Houston, Houston, TX.
- Patenaude-Jones, B. (1988). Relationship of social support to burnout and attitudes toward support groups in nurses. Unpublished doctoral dissertation. The University of Tennessee, Knoxville, TN.
- Schwirian, P. (1978). Evaluating the performance of nurses: A multidimensional approach. *Nursing Research*, 27, 347-351.
- Selye, H. (1976). *The stress of life*. New York: McGraw-Hill.
- Skiles, L., & Hinson, B. (1989). Occupational burnout among correctional health workers: Perceived levels of stress and social support. *American Association of Occupational Health Nursing Journal*, 37, 374-378.
- Stewart, W., & Barling, J. (1996). Daily work stress, mood and interpersonal job performance: A mediational model. *Work and Stress*, 10, 336-351.
- U.S. Department of Health and Human Services. (1999). *Stress at work*. Cincinnati, OH: NIOSH Publication.
- Westman, M., & Eden, D. (1996). The inverted-U relationship between stress and performance: A field study. *Work and Stress*, 10, 165-173.
- Wheeler, H., & Riding, R. (1994). Occupational stress in general nurses and midwives. *British Journal of Nursing*, 3, 527-534.