

Original Article

Sources of occupational stress and coping strategies among nurses who work in admission and emergency departments of hospitals related to Shiraz University of Medical Sciences

Sakineh Gholamzadeh* Farkhondeh Sharif**, Fereshteh Dehghan Rad***

Abstract

BACKGROUND: Occupational stress is a recognized problem in health care workers. Nursing has been identified as an occupation that has high levels of stress. This study aimed to investigate the sources of job stress and the adopted coping strategies of nurses who were working in an Accident and emergency department.

METHODS: In this descriptive survey ninety emergency ward nurses from three large teaching hospitals in Shiraz were involved. The data was collected through a self-administered questionnaire to identify the sources of job stress and nurse's profile and Lazarus standard questionnaires to determine the types of coping strategies.

RESULTS: The greatest proportion of respondents was women (86.7%), between 23-50 years old with less than 5 years of experience (56.7%). The following stressors were identified: problems related to physical environment, work load, dealing with patients or their relatives and handling their anger, being exposed to health and safety hazards, lack of support by nursing administrators, absence of the corresponding physician in the emergency room and lack of equipment. The most common strategy used by nurses was self-controlling and Positive Reappraisal and the least common strategy was accepting the responsibility. In this study large proportion of nurses used an emotion-focused strategy while Problem-focused approaches were generally less used.

CONCLUSIONS: It was concluded that coping skills, positive reappraisal and self-controlling are extremely important for emergency department nurses.

KEY WORDS: Psychological stress, coping skills, nurse, Admission department, emergency room

IJNMR 2011; 16(1): 41-46

Occupational stress is a recognized problem in health care workers.¹ Nursing has been identified as an occupation that has high levels of stress.² In an investigation conducted by the National Institute for Occupational Safety and Health in the USA, nurses were found to be one of the occupations that had a higher than expected incidence of stress-related health disorders.³ It was found that job stress brought about hazardous impacts not only on nurses' health but also their abilities to cope with job demands. This will seriously impair the provision of quality care and the efficacy of health services delivery.^{3,4} In a study of job stress among hospital nurses, it was found that

27% of the subjects experienced psycho physiological symptoms of stress and 38% reported consulting a doctor in the past 6 months. It has also been found that different nurses experience job stress different.^{3,4} In recent years there has been broad discussion on the nature of stressors experienced by members of "high risk" occupations and professions, for instance nursing and emergency workers, whose role is to support others through traumatic scenarios.⁵ Recognition is growing that health care professionals, especially emergency department staff, are at risk for experiencing critical incidents.⁷ Emergency Department nurses are in a position that is expected to deal with additional stressors.

*MSc, Faculty of Nursing and Midwifery, Shiraz University of Medical Science, Shiraz, Iran.

**PhD, Faculty of Nursing and Midwifery, Shiraz University of Medical Science, Shiraz, Iran.

***MSc, Faculty of Nursing and Midwifery, Shiraz University of Medical Science, Shiraz, Iran.

Correspondence to: Farkhondeh Sharifi, PhD.

These include unexpected numbers of patients at any time, unexpected rapid changes in patients' situations and response to distressing or traumatic incidents such as sudden death, patient violence, inappropriate attendees and physical or verbal abuse on a daily basis. Emergency nursing is a highly stressful profession.⁷

Most people can cope with stress for short periods but chronic stress produces prolonged changes in the physiological state.⁸ Effectiveness of coping behaviors depends on the situation in which they are used. Some coping behaviors may work well for some situations but not for others.⁹ In general terms, coping are a strategy that helps people reduce stress and solve problems⁸. Folkman et al define coping as "the person's cognitive and behavioral efforts to manage the internal and external demands in the person-environment transaction".⁹ People differ in the coping strategies that they adopt for dealing with stressful incidents.¹⁰ Individual's coping strategies should be viewed and assessed within their particular social, cultural and situational context.¹¹ A study by Li and Lambert on 102 intensive care nurses in china by a self-report questionnaire indicated that most workplace stressors was overload and most commonly used coping strategy was planning.¹² In another study by Burgess et al they found that certain personality trait such as openness and extraversion were associated with less perceived stress from the patient and relative in Intensive care unit nurses.¹³

Knowing what emergency workers do to cope and survive extreme incidents may help us understand and assist those who are more at risk of traumatic reactions.¹⁴

The issues of job stress, coping and burnout among nurses are of universal concern to all managers and administrators in the area of health care.² Therefore, the specific aim of this study was to investigate the sources of occupational stress and coping strategies among nurses who are working in emergency department in Shiraz (located in the South West of Iran). Thus the knowledge obtained would be useful in the formulation of recommendations to promote the health of these nurses and the-

reby improve the quality of care provision in emergency department.

All these stresses can be modified in a positive way by the use of appropriate stress management skills.

Methods

In this descriptive study the sample consisted of 90 emergency department nurses from three large teaching hospitals in Shiraz who volunteered to enroll in our study. All the respondents of this study held a baccalaureate degree.

A questionnaire, which consisted of three sections, was used to collect information regarding job stress and the adopted coping strategies of nurses working in the emergency department. The first section attempted to delineate nurses' personal profile, such as rank, year of service in nursing, marital status and descriptive demographic statistics. The second section of the questionnaire contained 60 items to identify the sources of job stress. This questionnaire had been developed following a literature review. A 4-point Likert-type scale was used ranging from "no stress" (scored as 1) to "a lot of stress" (scored as 4). A total score representing the overall frequency of stress experienced by a nurse was obtained by adding the nurse's responses to all 60 items. The range of the scores was from 0 to 240, with a higher score indicating higher job stress.

The third section used Lazarus standard questionnaires to determine the types of coping strategies, used by nurses to cope with job stress according to Folkman and Lazarus' cognitive appraisal model of coping.¹⁵ Coping involves a *conscious* effort to reduce stress. Within this model, coping strategies can be broadly categorized as either *problem-focused* (attempts to manage or alter the problem causing the stress) or *emotion-focused* (attempts to regulate emotional responses to the stressful situation).^{16, 8}

The main body of the Lazarus questionnaire contained 66 coping statements reflecting a wide range of thoughts and actions that people use to deal with taxing events. Fifty of the items on the questionnaire are divided into eight empirically constructed scales. The scales are de-

scribed as follows: Confrontive Coping, Distancing, Self-Controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving, Positive Reappraisal.¹⁶ Validity and Reliability of Iranian Version of Folkman and Lazarus Ways of Coping have been tested by Padyab and Ghazinour. It showed a good face and content validity. The Reliability of Ways of Coping questionnaire has been tested using the internal consistency method. The cronbach-alpha was 0.88.¹⁷

Descriptive statistics were used to illustrate the demographic profile of the respondents, the frequency of the adopted coping strategies, the mean scores of job stress and sources of stress. In addition, the mean response of each of the 66 coping statements and eight coping scales is determined for the sample for both the Use and Effectiveness sections. Data were cross tabulated and Chi square test of significance was calculated. The SPSS software version 11.5 was used to analyze the data.

Results

A total of 90 emergency department nurses from three large teaching hospitals were studied. The aim of the study was to investigate the sources of occupational stress and coping strategies among nurses.

The greatest proportion of respondents was women (86.7%), between 23-50 years old, had less than 5 years of clinical experience (56.7%). (Table 1)

The overall mean score of the Nursing Stress Scale was high (mean \pm SD = 162.28 \pm 35.28) which indicates that they experience high frequency of stress.

The study identified the following stressors as the major sources of stress between 60 stressors: problems related to physical environment, Work load, dealing with patients or their relatives and handling their anger or aggressive behaviour, being exposed to health and safety hazards, lack of support by nursing administrators, a physician not being present in a medical emergency and lack of equipments (Table 2).

Table 1. Demographic Characteristics of Respondents (N =90)

Characteristic	Frequency	Percentage
Gender		
Female	78	86.7
Male	12	13.3
Age		
Below 25	34	37.8
25-35	40	44.4
More than 35	16	17.8
Marital Status		
Single	44	48.9
Married	45	50
Separate/divorce	1	1.1
Year of service in nursing		
<5 years	51	56.7
5-10 years	18	20
11-15 years	8	8.9
>15 years	13	14.4
Year of service in ward		
<5 years	56	62.2
5-10 years	22	24.4
11-15 years	9	10
>15 years	3	3.4
Satisfaction in Nursing		
Yes	18	20
No	23	25.6
Nearly	49	54.4

The most common strategy used by nurses was Self-Controlling (The mean score was 12.92 with a standard deviation of 3.8) and Positive Reappraisal (Mean=12.92, SD=3.5) and the strategy least used was an Accepting Responsibility (Mean=5.65, SD=2.62). (Table 3).

In present study Problem-focused approaches were generally less used (Mean=18.9, SD=16.1) but an emotion-focused strategy were more used (Mean = 59.4, SD = 16.1). There was a significant relationship between the use of the Confrontive coping scale and sex of the participant (the women used this coping strategies more than men). There was no significant relationship in the use of any coping scale and other demographic variables considered in this study. The majority (74.4%) of nurses reported that they were satisfied with their jobs.

Table 2. Mean Intensity of Sources of Stress (N =90)

	Mean	S.D.
Physical environment	3.40	0.80
Work load	3.40	1
Dealing with patients or their relatives	3.33	0.85
Being exposed to health and safety hazards	3.30	0.99
Lack of support by nursing administrators	3.24	0.77
A physician not being present in a medical emergency	3.22	0.85
Lack of Equipment	3.1	0.98

The Mean Intensity of other Stressors among nurses who are working in A&E Department in Namazee Hospital in Shiraz was below three.

Table 3. Mean Coping Strategy Scores (N =90)

	Mean	S.D.
1-Confrontive Coping	7.68	3.23
2-Planful Problem Solving	11.24	3.1
3-Distancing	7.9	3.6
4-Self-Controlling	*12.92	3.8
5-Seeking Social Support	*12.08	3.1
6-Escape-Avoidance	7.77	4.41
7-Accepting Responsibility	5.65	2.62
8-Positive Reappraisal	*12.92	3.5

* Self-Controlling, Positive Reappraisal, Seeking Social Support were the most used strategies.

Discussion

With regard to the sources of stress, this study reveals that the "problem related to physical environment" created the most stress for nurses who are working in Admission and & Emergency department in Nemazee hospital in Shiraz. Also, lack of equipment, work load, lack of support by nursing administrators, being exposed to health and safety hazards, dealing with patients or their relatives and handling their anger, criticism or aggressive behavior and a physician not being present in the medical emergency room are the most common stressors among them. These stressors are similar to those identified in previous studies. Numerof and Abrams identified the organizational environment as a major source of perceived stress.¹⁸ In a study performed by McFarlane et al the major sources of stress was the external environment and the amount and quality of the workload.¹⁹

Callaghan et al in a study attempted to identify the factors related to stress and coping

among Chinese nurses in Hong Kong. The major sources of stress were related to nursing issues like too much work, interpersonal relationships and dealing with hospital administration.²⁰

In present study, it was found that the most common strategy used by nurses was Self - Controlling and Positive Reappraisal and the strategy least used was an Accepting Responsibility. Exercising self-control is a cultural character trait common in nurses within Asia. Prior research has shown self-control to be the major coping method of nurses from Japan, Thailand and China.^{2,21}

The second most common strategy used by the nurses was positive reappraisal. One of the reasons why positive reappraisal may be used more is because this coping strategy has religious dimensions and nurses who are working in Iran utilize more religious coping than other countries. May be spirituality play a major role. In addition, both painful problem solving and positive reappraisal are coping methods that can be enhanced through increased educational preparation and work experience.²²

All of respondents in this study held a baccalaureate degree. It is possible that the reason that they used positive reappraisal coping mode was because of the educational background.

The results of the study were similar to previous research. In a study performed by Xianyu et al the relationships among workplace stressors, ways of coping and the mental health of Chinese head nurses were investigated. Positive reappraisal, planful problem solving and self-

control were found to be the three most frequently identified ways of coping.²

Also In a study performed by Bianchi, he attempted to identify the stress and coping strategies among cardiovascular nurses in Brazil. The results identified work conditions as the major source of stress for nurses and use of positive reappraisal, self-controlling skills and social support to cope with job stress.²³

In this study accepting responsibility was the least frequently used coping strategy among nurses. This suggests that they tend not to blame themselves nor think that it is their sole responsibility to address the problem. Similarly, In a study conducted by Ryan et al in Ireland to identify the stress in psychiatric nursing, they found that the most frequently reported method of coping was the use of self-controlling strategies (mean=9.44, SD=4.59) while the least frequently reported method of coping was accepting responsibility (mean = 3.55, SD = 2.99).²⁴

Bianchi, states that nurses are using coping strategies based on personal resources.²³ According to Folkman and Lazarus' cognitive appraisal model of coping, coping involves a *conscious* effort to reduce stress.²² Within this model, coping strategies can be broadly categorized as either *problem-focused* (attempts to manage or alter the problem causing the stress) or *emotion-focused* (attempts to regulate emotional responses to the stressful situation)¹⁵.

In present study emotion-focussed approaches were generally more used (Mean = 59.4, SD = 16.2) and problem-focused strategy were less used (Mean = 18.9, SD = 5.3). Collins and Jones found that the decision to employ a particular coping strategy is influenced by one's perceptions of personal control

over the stressful situation. Where an individual perceives a stressful situation to be beyond their control, they are more likely to utilize emotion-focused coping strategies; where the individual perceives an opportunity to alter the situation, problem-focused coping strategies will be preferred.¹⁵ In the present study, Accepting Responsibility were generally less used, may be for this reason problem-focused strategy less used, because Problem-focused ways of coping was reported by those with problems concerned with Responsibility. Also it may be they felt that solutions to the problem were outside their control. It is important to note that problem related to physical environment remain as the major reported sources of stress in this group of nurses. It was concluded that the scale of Self - Controlling and Positive Reappraisal was reported to be the most used by emergency department nurses. In present study emotion-focused approaches were generally more used.

The authors declare no conflict of interest in this study.

Acknowledgments

This study was conducted with support from Shiraz University of Medical Sciences, vice chancellor for research (approved research proposal number 2431). The authors would like to thank Dr N. Zare (Associate Professor of Biostatistics from Shiraz University, Nemazee Clinical Research Center) who provided the statistical analysis, Somaye Gholamzadeh (computer student) who entered and coded data and Sarah Masoumi for editing the manuscript. The researchers are also indebted to the many emergency department personnel who gave their time to contribute to this survey.

References

1. Burbeck R, Coomber S, Robinson SM, Todd C. Occupational stress in consultants in accident and emergency medicine: a national survey of levels of stress at work. *Emerg Med J* 2002; 19(3): 234-8.
2. Xianyu Y, Lambert VA. Investigation of the relationships among workplace stressors, ways of coping, and the mental health of Chinese head nurses. *Nurs Health Sci* 2006; 8(3): 147-55.
3. Lee JK. Job stress, coping and health perceptions of Hong Kong primary care nurses. *Int J Nurs Pract* 2003; 9(2): 86-91.
4. Farrington A. Stress and nursing. *Br J Nurs* 1995; 4(10): 574-8.
5. Gillespie BM, Kermode S. How do perioperative nurses cope with stress? *Contemporary Nurse* 2004; 16(1-2): 20-9.

6. Boudreaux ED, McCabe B. Emergency Psychiatry: Critical Incident Stress Management: I. Interventions and Effectiveness. *Psychiatr Serv* 2000; 51(9): 1095-7.
7. Yang Y, Koh D, Ng V, Lee CY, Chan G, Dong F, et al. Self perceived work related stress and the relation with salivary IgA and lysozyme among emergency department nurses. *Occup Environ Med* 2002; 59(12): 836-41.
8. Chang EC, Tugade MM, Asakawa K. Stress and coping among Asian Americans: Lazarus and Folkman's model and beyond. In: Wong PT, Wong LC, editors. *Handbook of multicultural perspectives on stress and coping*. Dordrecht: Kluwer Academic Publishers; 2006.
9. Folkman S, Lazarus RS, Gruen RJ, DeLongis A. Appraisal, coping, health status, and psychological symptoms. *J Pers Soc Psychol* 1986; 50(3): 571-9.
10. Paice E, Rutter H, Wetherell M, Winder B, McManus IC. Stressful incidents, stress and coping strategies in the pre-registration house officer year. *Med Educ* 2002; 36(1): 56-65.
11. Culture shapes coping strategies Immigration has implications for mental health care providers. An article from the University of Calgary Gazette 2003. p. 131. www.cmhask.com/inside/citizens/programs_citizensLinks.htm/
12. Li J, Lambert VA. Workplace stressors, coping, demographics and job satisfaction in Chinese intensive care nurses. *Nurs Crit Care* 2008; 13(1): 12-24.
13. Burgess L, Irvine F, Wallymahmed A. Personality, stress and coping in intensive care nurses: a descriptive exploratory study. *Nurs Crit Care* 2010; 15(3): 129-40.
14. Moran CC, Massam M. An evaluation of humour in emergency work. *The Australasian Journal of Disaster and Trauma Studies* 1997; 3: 26-38. [Online]. Available from: URL: <http://massey.ac.nz/trauma/>
15. Collins FE, Jones KV. Dissociation in Australia and North America: An international investigation of dissociation in non-clinical adult populations. Proceedings of the 38th Australian Psychological Society Annual Conference; 2003 Nov 25-28; Monash University Melbourne, Australia; 2003. p. 45-7.
16. Abel MH. Humor, stress, and coping strategies. *Humor -International Journal of Humor Research* 2002; 15(4): 365-81.
17. Padyab M, Ghazinour M. Iranian version of Ways of Coping questionnaire. Umea: University of UMEA; 2009.
18. Numerof RE, Abrams MN. Sources of stress among nurses: an empirical investigation. *J Human Stress* 1984; 10(2): 88-100.
19. McFarlane D, Duff EM, Bailey EY. Coping with occupational stress in an accident and emergency department. *West Indian Med J* 2004; 53(4): 242-7.
20. Callaghan P, Tak-Ying SA, Wyatt PA. Factors related to stress and coping among Chinese nurses in Hong Kong. *J Adv Nurs* 2000; 31(6): 1518-27.
21. Lambert VA, Lambert Clinton E Literature review of role stress/strain on nurses: an international perspective. *Nurs and Health Sci* 2001; 3(3): 161-72.
22. Lazarus RS, Folkman S. *Stress, appraisal, and coping*. New York: Springer Publishing Company, 1984.
23. Bianchi ER. Stress and coping among cardiovascular nurses: a survey in Brazil. *Issues Ment Health Nurs* 2004; 25(7): 737-45.
24. Ryan D, Quayle E. Stress in psychiatric nursing: fact or fiction? *Nurs Stand* 1999; 14(8): 32-5.