Coping Strategies Among Nurses

ASSESSING FACTORS THAT AFFECT COPING STRATEGIES AMONG NURSING PERSONNEL

Sofia Zyga, Stavroula Mitrousi, Victoria Alikari, Athanasios Sachlas, John Statthoulis, Evangelos Fradelos, Georgios Panoutsopoulos, Lavdaniti Maria

© 2016 Sofia Zyga, Stavroula Mitrousi, Victoria Alikari, Athanasios Sachlas, John Statthoulis, Evangelos Fradelos, Georgios Panoutsopoulos, Lavdaniti Maria

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (http://creativecommons.org/licenses/by-nc/4.0/) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Introduction: The nursing profession is characterized as one of the most stressful professions. A significant number of international surveys prove that nurses experience anxiety that often is accompanied by intense symptoms that negatively affect their work performance and their psychological mood. Aim: To evaluate the ways of coping in stress adopted by the nursing staff and their relationship with sociodemographic and job characteristics. Methodology: A cross-sectional, quantitative study was conducted in seven hospitals of Peloponnese Region, Greece. The study took place between April 2013–June 2013 and 395 nurses completed the Ways of Coping questionnaire. Socio-demographic, educational and job characteristics of nurses were also, recorded. Results: Strategies focused on the problem were adopted to a greater extent more by postgraduate nurses, head nurses, and nurses with greater working experience. Intensive Care Unit nurses mainly adopted the strategy of denial while strategies focused on emotions were mostly adopted by females. Age and marital status did not affect significantly the choice of coping strategies. Conclusions: According to our findings several demographic factors that affect coping in stressful situations can be investigated and such an investigation could offer useful research findings for consideration. Key words: nurses’ stress, ways of coping, nurse-patient ratio, clinical department effect, educational level.

1. INTRODUCTION

The nursing job is identified as one of the most stressful jobs and it is characterized as “high intensity profession” (1-4). When exercising the nursing profession, role conflicts is often created both with other related professions and between themselves (5). Five main stressors affecting the level of satisfaction among nurses are identified such as (6): lack of communication, job requirements, professional development, problems with patients, and balance between personal and professional life. In addition, the persistent exposure to stressful events, such as death, pain, and grief can lead to reduced productivity and development of negative emotions (7,8). Stress is known to cause emotional exhaustion in nurses and lead to negative feelings toward those in their care. Greek nurses experience burnout due to environmental or individual factors. Work environment factors encompass lack of staff, exhausting shifts, lack of autonomy and authority, numerous requirements from the patients and their relatives, lack of support from supervisors and colleagues, use of technology and, finally, frequent exposure to death. Among individual factors the personality of the worker, motives that led him choose his profession, expectations from his job and the way of perceiving and reacting to stressful situations are included (9-13).

Addressing of stress situations is attributed in the literature to the English-language term “coping” (14,15). The same term is also used in other languages, except English, as it is comprehensive and encompasses a number of diverse activities and behaviors. Lazarus and Folkman (1984), who are considered the founders of the related research, defined coping as “ongoing cognitive and behavioral efforts to manage specific (external and/or internal) demands that are appraised as taxing or exceeding the resources of the individual.” (16).

Several dimensions have been suggested for the classification of coping strategies in stress situations (11). Some researchers, using an individual’s direction of actions as classification criteria, discriminate the ways of coping strategies (WCS) between: problem and emotion focused (11, 17), approach and avoidance (18) engagement and disengagement (19), active and avoidance (20), primary and secondary control (21), cognitive and behavioral (22) neurodegeneration...
and mature (23) energetic strategies which are adequate (with regard to environmental requirements) (24).

In all these cases, the primary function of WCS is to facilitate the adjustment of the individual. The extent, to which these WCS are effective, has been the subject of many studies due to the interest to human mental health.

Under the pressure of the aforementioned stressors, nurses try to maintain their professional performance by adopting strategies for dealing with stress. Literature review highlights many WCS used by nurses. The most frequently ways used by nurses are the positive strategic approach and positive reassessment, problem based solution, planning work and priority setting in the work (25-34) while less frequently used strategies are those focused on emotion (35,26,27,30-32) such as avoidance, humor, refusal, self-blame and acceptance of responsibilities. Seeking social support has also been a stress coping strategy according to several researchers (24,26,27,30,35,36), while self-control is reported in fewer studies (26,27,31-34). Finally, passive strategies such as invoking to God are reported less frequently (25,35).

The originality of this research study is the fact that nurses originate from regional hospitals rather than hospitals of large urban cities. Moreover, this study provided the possibility of participation from all nurses. Finally, this survey assessed “coping” among Greek nurses, a study that is not extensively assessed in Greece.

2. METHODS

The aim of this quantitative, cross-sectional study was the investigation of the stress coping strategies adopted by nursing staff and their relationship with sociodemographic and job characteristics.

All 430 nurses in the broader area of Peloponnesse were asked to take part in this study conducted from April 2013–June 2013. The nurses became from all Clinical Departments and Units of the following Hospitals: a) General Hospital of Argos, b) General Hospital of Kalamata, c) General Hospital of Korinthos, d) General Hospital of Sparta, e) General Hospital of Molaoi, f) General Hospital of Pyrgos and g) General Hospital of Tripoli. Although it was attempted for all nurses to participate in the present study, finally, the response rate was 92% (395 nurses returned the questionnaire).

The Greek version of the Ways of Coping Questionnaire (revised) (WCQ) (37), composed of 38 items, was used to explore the WCS. Sociodemographic data, educational and job characteristics were recorded. The scale consisted of five factors: a) Positive approach (11 items), including positive re-evaluation and problem solving, b) Seeking social support (6 items), c) Prayer / Daydream (8 items), including prayer and searching for divine intervention, d) Avoidance / Escape (9 items), including resignation and denial, and e) Assertive problem solving (4 items). Items were rated on a four-point Likert scale, where 0 = never, 1 = rarely, 2 = sometimes and 3 = often. Higher scores indicated that the WCS is regularly used. The Greek version of the WCS was used after the permission of Professor Karadimas (1998). In the present study, Cronbach’s coefficient alpha ranged from 0.506 to 0.868.

This study met the fundamental ethical principles that govern the conduct of a research. Particularly, full confidentiality was kept with regard to information on the participants, the safety of the material was retained, the anonymity of the participants was protected and the results obtained were used only for the purposes of this research study. The study protocol is in compliance with the Helsinki Declaration and was approved by the Scientific and Ethical Committees of all participating hospitals.

Descriptive statistics (mean and standard deviation) were calculated to describe quantitative variables. Absolute and relative frequencies were used to describe quantitative variables (demographic characteristics and ways of coping strategies). The parametric t-test and the non-parametric Mann-Whitney test were used to determine whether there was a difference in mean scores between two independent groups. The correlation between quantitative variables was assessed through the Pearson’s r. For the statistical analysis, the IBM SPSS Statistics v22 was used and the level of statistical significance was set up to 5%.

3. RESULTS

In this study 395 nurses participated. The demographic characteristics of the nurses participated in the study are shown in Table 1. The relationship between the factors and gender is presented in Table 2. A statistically significant relationship was detected between gender and the following factors: “Prayer / Daydream” (p = 0.004), “Prayer” (p=0.019), “Searching of divine intervention” (p=0.008), “Avoidance / Escape” (p=0.029) and “Denial” (p=0.043). Age and marital status did not affect significantly any of the factors while educational level affected the factors “Prayer / Daydream” (p = 0.004) and “Prayer” (p = 0.009) (Table 3). The possession of a postgraduate degree affected significantly the following factors: “Positive approach” (p = 0.006), “Positive re-evaluation” (p = 0.015), “Problem solving” (p = 0.003), “Seeking social support” (p = 0.145), “Prayer / Daydream” (p = 0.005), “Prayer” (p = 0.001) και “Assertive problem solving” (p = 0.039) (Table 4). With the exception of the factors “Prayer / daydream” and “Prayer”, individuals with a postgraduate degree achieved a higher score. The job position affected significantly the factors “Positive approach” (p < 0.001), “Positive re-evaluation” (p = 0.001), “Problem solving” (p = 0.001) and “Denial” (p = 0.001) (Table 5). In all cases, the nurses reached lower scores. Head nurses had higher score in factors “Problem solving” and “Denial” while Deputy Head Nurses in clinical departments scored higher in factors “Positive approach” and “Positive re-evaluation”. The Nursing Department affected significantly the factors “Prayer / Daydream” (p < 0.025), “Prayer” (p = 0.004), “Avoidance/Escape” (p = 0.021) and “Denial” (p = 0.045) (Table 6). In all cases, the Laboratory Department had lower scores. Surgical Departments reached the highest score in all factors, except for “Denial”, where nurses in Intensive Care Units (ICU) achieved the highest score. The “Positive approach” and the “Positive re-evaluation” was significantly correlated with the number of patients of morning shift (Pearson’s r = 0.130; p = 0.017 and Pearson’s r = 0.117; p = 0.032 respectively) and night shift (Pearson’s r = 0.138; p = 0.022 and Pearson’s r = 0.135; p = 0.009 respectively). The “Problem solving” was significantly correlated only with the number of patients of morning shift (Pearson’s r = 0.129; p = 0.018) while “As-
assertive problem solving’ was significantly correlated only with the number of patients of afternoon shift (Pearson’s r = 0.116; p = 0.041).

The working experience, in years, was significantly correlated with the factors “Avoidance / Escape” (Pearson’s r = 0.099; p = 0.050) and “Denial” (Pearson’s r = 0.112; p = 0.027).

4. DISCUSSION
This study was aimed to assess the ways of coping strategies among 395 nurses from seven hospitals of Peloponese region in Greece. The WAYS of Coping Questionnaire was used for the first time by Karadimas (1998) and then it was adopted by other, Greek researchers (38,39). It was constructed in order to explore the interaction between the individual and its environment. In this study, the impact of socio-demographic, educational and job characteristics to coping strategies was investigated. According to the findings of the present study, gender, educational level, job position, nursing department and the number of patients in morning and afternoon shifts can affect the ways of coping.

### Table 1. Participant demographics

| Demographic data                  | Frequency | Percentage (%) |
|-----------------------------------|-----------|----------------|
| Gender                            |           |                |
| Female                            | 364       | 92.2%          |
| Male                              | 31        | 7.8%           |
| Age(years)                        |           |                |
| 20-30                             | 67        | 17.0%          |
| 31-40                             | 153       | 38.7%          |
| 41-50                             | 155       | 39.2%          |
| >51                               | 20        | 5.1%           |
| Marital status                    |           |                |
| Married                           | 260       | 65.8%          |
| Unmarried                         | 122       | 30.9%          |
| Divorced                          | 11        | 2.8%           |
| Widowed                           | 2         | 0.5%           |
| Number of children                |           |                |
| None                              | 173       | 43.8%          |
| 1                                 | 50        | 12.7%          |
| 2                                 | 153       | 38.7%          |
| 3                                 | 18        | 4.6%           |
| >3                                | 1         | 0.3%           |
| Educational level                 |           |                |
| Technological Education Institute | 370       | 93.7%          |
| University                        | 25        | 6.3%           |
| Postgraduate degree               |           |                |
| Yes                               | 35        | 8.9%           |
| No                                | 360       | 91.1%          |
| PhD degree                        |           |                |
| Yes                               | 3         | 0.8%           |
| No                                | 392       | 99.2%          |
| Type of employment                |           |                |
| Full time                         | 391       | 99.0%          |
| Part time                         | 4         | 1.0%           |
| Hospital                          |           |                |
| Argos                             | 53        | 13.4%          |
| Kalamata                          | 86        | 21.8%          |
| Korinthos                         | 66        | 16.7%          |
| Melos                             | 11        | 2.8%           |
| Pyrgos                            | 61        | 15.4%          |
| Sparta                            | 58        | 14.7%          |
| Tripoli                           | 60        | 15.2%          |
| Job position                      |           |                |
| Director of Nursing Service       | 4         | 1.0%           |
| Director of Nursing Sector        | 6         | 1.5%           |
| Head nurse of Clinical Department | 45        | 11.4%          |
| Deputy Head Nurses of Clinical Department | 39  | 9.9%          |
| Nurse                             | 301       | 76.2%          |

Table 2. The effect of gender on the factors

| Factors                        | Women (N=364) | Men (N=31) | p-value |
|--------------------------------|---------------|------------|---------|
| Positive approach              | 2.06 (0.512)  | 2.17 (0.522) | 0.149   |
| Positive re-evaluation         | 2.16 (0.537)  | 2.24 (0.543) | 0.290   |
| Problem solving                | 1.90 (0.573)  | 2.06 (0.622) | 0.117   |
| Seeking social support         | 1.94 (0.546)  | 1.83 (0.594) | 0.303   |
| Prayer / Daydream              | 1.81 (0.575)  | 1.45 (0.753) | 0.004   |
| Prayer                         | 1.84 (0.697)  | 1.52 (0.772) | 0.019   |
| Searching of Divine intervention | 1.64 (0.761) | 1.23 (0.960) | 0.008   |
| Avoidance / Escape             | 1.70 (0.486)  | 1.48 (0.576) | 0.029   |
| Resignation                    | 1.70 (0.556)  | 1.48 (0.606) | 0.070   |
| Denial                         | 1.70 (0.593)  | 1.48 (0.674) | 0.043   |
| Assertive problem solving      | 1.43 (0.547)  | 1.51 (0.534) | 0.464   |

Mean (SD) * significant in 5% (Mann-Whitney test used)

Table 3. The effect of education level on the factors

| Factors                        | Technological Education (N=370) | University (N=25) | p-value |
|--------------------------------|---------------------------------|-------------------|---------|
| Positive approach              | 2.07 (0.516)                   | 2.06 (0.485)      | 0.673   |
| Positive re-evaluation         | 2.16 (0.538)                   | 2.12 (0.536)      | 0.511   |
| Problem solving                | 1.91 (0.582)                   | 1.95 (0.510)      | 0.874   |
| Seeking social support         | 1.93 (0.548)                   | 1.93 (0.603)      | 0.880   |
| Prayer / Daydream              | 1.80 (0.596)                   | 1.48 (0.544)      | 0.004*  |
| Prayer                         | 1.84 (0.708)                   | 1.49 (0.625)      | 0.009*  |
| Searching of Divine intervention | 1.63 (0.790)                 | 1.36 (0.667)      | 0.072   |
| Avoidance / Escape             | 1.69 (0.498)                   | 1.63 (0.468)      | 0.608   |
| Resignation                    | 1.69 (0.564)                   | 1.59 (0.540)      | 0.476   |
| Denial                         | 1.68 (0.605)                   | 1.68 (0.571)      | 0.944   |
| Assertive problem solving      | 1.43 (0.542)                   | 1.58 (0.589)      | 0.249   |

Mean (SD) * significant in 5% (Mann-Whitney test used)

Table 4. The effect of the possession of a postgraduate degree on the factors

| Factors                        | Possession (N=360) | No possession (N=35) | p-value |
|--------------------------------|--------------------|----------------------|---------|
| Positive approach              | 2.05 (0.515)       | 2.30 (0.441)         | 0.006   |
| Positive re-evaluation         | 2.14 (0.539)       | 2.36 (0.473)         | 0.015   |
| Problem solving                | 1.89 (0.579)       | 2.18 (0.491)         | 0.003   |
| Seeking social support         | 1.92 (0.550)       | 2.04 (0.556)         | 0.145   |
| Prayer / Daydream              | 1.80 (0.538)       | 1.53 (0.543)         | 0.005   |
| Prayer                         | 1.85 (0.711)       | 1.47 (0.580)         | 0.001*  |
| Searching of Divine intervention | 1.62 (0.791)     | 1.50 (0.720)         | 0.367   |
| Avoidance / Escape             | 1.69 (0.493)       | 1.64 (0.530)         | 0.707   |
| Resignation                    | 1.69 (0.556)       | 1.61 (0.621)         | 0.539   |
| Denial                         | 1.68 (0.600)       | 1.67 (0.629)         | 0.989   |
| Assertive problem solving      | 1.43 (0.549)       | 1.59 (0.492)         | 0.039*  |

Mean (SD) * significant in 5% (Mann-Whitney test used)

Table 4. The effect of the possession of a postgraduate degree on the factors
Coping Strategies Among Nurses

Regarding the influence of gender upon the selection of coping strategies, women were found to outweigh men concerning the choice of specific strategies. In particular, it was found that women systematically manifest the ways focused on emotion (search of divine intervention” and “prayer / daydreaming”). This finding is in accordance with the findings of other researchers (43), where they revealed that women implement more often strategies focused on solving the problem. Although these findings were expected, significant differences between sexes are not reported in other studies (26,40) which can be attributed to cultural differences.

The influence of educational characteristics on the choice of strategies indicated that nurses graduated from Universities were using to a significantly lower extent the strategies “Prayer/Daydream” and “searching of Divine intervention” compared to nurses with inferior academic status. Therefore, the increase of knowledge due to university postgraduate programs can provide nurses with more confidence (37). However, other researchers (41) highlighted that the choice of coping strategies is depended mainly on the individual’s personality. As far as the clinical experience is essential. Ultimately, continuing education for nurses working in clinical settings and demographic or job variables.

5. CONCLUSIONS

Therefore, having reviewed the literature, we propose the design of interventions focused on promoting physical and mental health for nurses working in clinical settings with increased requirements. Furthermore, training in the management of anxiety symptoms and learning relaxation techniques can be aimed to the proper functioning of the body. It is, also, recommended to implement psychological support programs by establishing support and counseling groups for problem solving techniques (46). Extensive investigation of stress and its effects as well as data collection regarding the way of stress identification through personal experience is essential. Ultimately, continuing education for updating the knowledge and familiarity with the technological equipment is proposed for the reduction of stress levels.

The present study was aimed at nurses of all clinical departments. The evaluation of the findings of this research study showed the existence of statistically significant interactions between the coping strategies to stressful situa-
Coping Strategies Among Nurses

1. Etkarpidis A, Etkarpidis P, Zyga S. A study of the emotional intelligence of employees at a district hospital of Greece. International Journal of Caring Sciences. 2012; 5(3):36-42.

2. Farahbod F, Goudarzvand Chegini M, Kouchakinejad Erasmatadi S, Mohtasham-Amiri Z. The association between social capital and burn-out in nurses of a trauma referral teaching hospital. Acta Med Iran. 2015; 53(4):214-219.

3. Mitrousi S, Travlos A, Koukia E, Zyga S. The experience of anxiety in nursing in public hospitals of Peloponnesus, Greece. International Journal of Caring Sciences. 2014; 7(1):188-194.

4. Wilkinson S. How nurses can cope with stress and avoid burnout. Emerg Nurse. 2014; 22(7):27-31. doi: 10.7748/enn.22.7.27.e1354.

5. Kushner J, Ruffin T. Empowering a healthy practice environment. Nurs Clin North Am. 2015; 50(1):167-183. doi: 10.1016/j.cnur.2014.10.013.

6. Rout UR. Stress amongst district nurses: a preliminary investigation. J Clin Nurs. 2000; 9(2):303-309.

7. Adib-Hajbaghery M, Khameneh M, Alavi NM. Nurses’ perception of occupational stress and its influencing factors: A qualitative study. Iran J Nurs Midwifery Res. 2012; 17(6):352-359.

8. Keller SM. Effects of extended work shifts and shift work on patient safety, productivity, and employee health. AAOHN J. 2009; 57(12):497-502. doi:10.3928/08910162-20091124-05.

9. Bouza A, Kleiarchakos MK, Gioka V, Belegri SA. Relationship of occupational stress parameters with burn-out and perceived stress. Psychiatr. 2015; 25(2):106-115.

10. Karanikola MN, Kleanthous E. Exploration of burnout risk factors among mental health nurses. Nussolektiki. 2011; 50(1):163-176.

11. Mitrousi S, Travlos A, Koukia E, Zyga S. Theoretical approaches to coping. International Journal of Caring Sciences. 2013; 6(2):131-137.

12. Noura M, Mouchaki S, Argypouloudos D, Ylan E, Kyriakidou B, Tsiriga S et al. Nurses’ professional burnout in Athens and area provinces. Intscientiﬁc Health Care. 2010; 22(2):99-103.

13. Pustikou AM, Zyga S, Sachlas A, Katsa MJ, Daratsianou M, Rojas Gil AP. Determinative factors of being an effective health-care role model. International Journal of Occupational Health and Public Health Nursing. 2014; 1(3):3-14.

14. Ghiaysavandian S, Adera Gbenda A. Coping work strategies and job satisfaction among Iranian nurses. Iran Red Crescent Med J. 2014; 16(2):17779. doi:10.5822/irccm.17779.

15. McTiernan K, McDonald N. (2015). Occupational stressors, burnout and coping strategies for Job stress. J Occup Health. 2011; 53:123-129.

16. Lambert VA, Lambert CE, Itano J, Inouye J, Kim S, Kunivitkükl W et al. Cross-cultural comparison of workplace stressors, ways of coping and demographic characteristics as predictors of physical and mental health among hospital nurses in Japan, Thailand, South Korea and the USA (Hawaii). Int J Nurs Stud. 2004; 41:671-684.

17. Laranjeta CA. The effects of perceived stress and ways of coping in a sample of Portuguese health workers. J Clin Nurs. 2012; 21(11-12): 1755-1762. doi:10.1111/j.1365-2702.2011.09848.x.

18. Li J, Lambert VA. Workplace stressors, coping, demographics and job satisfaction in Chinese intensive care nurses. Nurs Crit Care. 2008; 13(1):24-30. doi:10.1111/j.1478-5153.2007.00220.x.

19. Mark G, Smith AP. Occupational stress, job-characteristics, coping, and the mental health of nurses. British Journal of Health Psychology. 2012; 17 (3):505-521. doi:10.1342/0963721411Y.20025.

20. Rodrigues AB, Chaves EC. Stressing factors and coping strategies used by oncology nurses. Rev Lat Am Enfermagem. 2008; 16(1):24-28.

21. Wei-Wen Liu, Feng-Chuan Pan, Pei-Chi Wen, Sen-Ji Chen, Su-Hui Lin, Job Stressors and coping mechanisms among emergency department nurses in the Armed Force hospitals of Taiwan. International Journal of Human and Social Sciences. 2010; 5(10):626-633.

22. Xianyan Y, Lambert VA. Investigation of the relationships among workplace stressors, ways of coping, and the mental health of Chinese head nurses. Nursing and Health Sciences. 2006; 8:147-155.

23. Chang EM, Daly J, Hancock KM, Bidewell JW, Johnson A, Lambert VA et al. The relationships among workplace stressors, coping methods, demographic characteristics, and health in Australian nurses. J Prof Nurs. 2006; 22(1):30-38.

24. Van der Colff JF, Rothmann S. Occupational stress, sense of coherence, coping, burnout and work engagement of registered nurses in South Africa. SA Journal of Industrial Psychology. 2009; 35(1):1-10. doi:10.4102/sajip.v35i1.423.

25. Karadimas FC. The adaptation of the Ways of Coping Questionnaire in the Greek language. Psychology. 1998; 5(3):260-273.

26. Velana M, Barbouni A, Merakou K, Koutis C, Kremastinou T. Research of quality of life in students of programmes of postgraduate studies in Public Health. Archives of Hellenic Medicine. 2012; 29(2):195-201.

27. Koularkis A, Agra D. Stress, burnout, mental health and coping strategies among the staff of Greek correctional institutions. Archives of Hellenic Medicine. 2010; 27(6):944-952.

28. Abasimit E, Atin andreblia S, Gal X, Mahamah MM. Analysis of stress coping strategies among diploma nursing students in Ghana. International Journal of Applied Psychology. 2015; 5(2):26-32. doi:10.5923/j.apap.20150502.02.

29. Babatsikou F, Zyga S, Eleftheriou A. Work related stress in nursing care. Review of clinical pharmacology and pharmacokinetics. 2012: 26-87-92.

30. Lim J, Bogossian F, Ahern K. Stress and coping in Singaporean nurses: a literature review. Nurs Health Sci. 2010; 12(2):251-258. doi: 10.1111/j.1442-2591.2010.00314.x.

31. Laal M, Ali rame A, Barbour AL. Sensitivity of health care professionals. Archivos de Halscicnic Medicine. 2010; 27(6):944-952.

32. Bellal T, Kontiominopoulos N, Kalafati M, Niakas D. Exploring the effect of professional burnout on health-related quality of life in Greek nurses. Archives of Hellenic Medicine. 2007; 24 (Suppl 1):75-84.

33. Zyga S, Tsivos H, Malliaros M, Stathoulis J, Babatsikou F, Lavdaniti M et al. Intensification of renal nurses’ self-esteem: A Pilot Study. International Journal of Caring Sciences. 2012; 5(3):320-7.