

Perceived work-related stress and coping strategies among critical care nurses – A preliminary study from Sri Lanka

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ABSTRACT

Introduction: Work-related stress has become a major concern among the nurses over the years. Nurses experience a high level of work-related stress when work demands exceed their ability to cope. The study aimed to assess the perceived work-related stress level and coping strategies among nurses working in Critical Care Units at a Base Hospital in the Eastern Province of Sri Lanka.

Methods: A cross sectional descriptive study was conducted among all staff nurses (105) working in critical care units. Data were collected using a validated and pre-tested self-administered questionnaire. A Perceived Stress Scale developed by Cohen et al. (1983) and validated in Sri Lanka was used to assess the work-related stress, along with coping strategies. Data were analyzed by descriptive statistics using SPSS version 21.

Results: Around 30% of nurses had higher level of perceived stress while 45% had moderate level of perceived stress. Nearly 81% of nurses stated that religious activities are used as a common coping strategy. In addition, 96% of them used 'positive thinking' while 70% of them used 'time management' as the main coping strategy.

Conclusion: The prevalence of work-related perceived stress among critical care nurses was high. Further, nurses use various emotion focused coping strategies such as regular engagement in religious activities and positive thinking and problem focused coping strategies such as time management and talk with friends/loved ones to overcome the work-related stress.

Key words: Coping strategies, Nurses, Sri Lanka, Stress, Time management

Introduction

The nursing profession is believed to be one of the highly stressful occupation worldwide.¹ Nurses play a key role and encompass the largest workforce in any health care institution. Further, they act as direct caregivers who serve a hospital twenty-four

hours a day, seven days a week, which gives nurses a unique perspective on both patient care and hospital operations.² Nurses work long hours in hospitals, and the job is physically challenging. In addition, nurses deal with human suffering daily, and need a high level of vigilance to assure patient safety in an environment that is complex. Several studies have shown that nurses often face multiple sources for increased work-related stress, including constant noise, interpersonal conflicts with other healthcare professionals, workload demands, role conflicts, dealing with death and dying, lack of resources, lack of support from co-workers and supervisors, patient aggressiveness or violence and increasing patient loads.^{3,4} All these factors can increase a nurse's perceived stress level and affect their health.⁵ Further, it was reported that critical care

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nurses experience more perceived stress than other nurses^{6,7} due to regular expectation of emergencies, high technological complexity, and concentration of severely injured and life-threatening patients subject to sudden changes in their general health status.⁸

Stress occurs when perceived demand exceed the individuals' coping abilities. Coping strategies help to moderate or buffer the impact of stressors on physical and psychological well-being.⁹ Further, coping strategies are used by individuals to alter their personal perception and behavior in response to the conflicts raised from their working environment due to increased stress level. Therefore, nurses with higher levels of coping abilities to cope with professional challenges are more likely to succeed in the nursing profession, work hard, and perform their job tasks effectively.^{10,11,12} Coping strategies can be emotion focused or problem focused. Emotion-focused coping includes all the regulative efforts to diminish the emotional consequences of stressful events, while problem-focused coping includes all the active efforts to manage stressful situations and alter a troubled person-environment relationship to modify or eliminate the sources of stress via individual behavior.¹³

Further, perceived stress and coping abilities influence the health and work performance of the nurses. Perceived stress diminishes both general quality of life and person's sense of well-being. According to Alenezi (2018), work-related stress in the working environment significantly affects the performance of nurses and organizations.¹⁴ Stress may provoke poor nursing and poor administrative performance, leading to substandard quality of patient care.

Even though, many studies have been conducted in many parts of the world, we could not identify any reported studies conducted to assess the perceived stress level along with coping strategies among critical care nurses, especially in Eastern province of Sri Lanka. Thus, this study aimed to assess the work-related perceived stress level and coping strategies among nurses working in Critical Care Units at Ashraff Memorial Hospital, Kalmunai as a preliminary study.

Methods

A cross-sectional descriptive study was conducted among all nurses who work at all critical care units, such as Intensive Care Unit (ICU), High Dependency Unit (HDU), Neonatal Intensive Care Unit (NICU),

Preliminary Care Unit (PCU), and Operation Theatre (OT), in Ashraff Memorial Hospital, Kalmunai. Both male and female nurses working in all critical care units were included and nurses who were on long term leave (maternal leave, accident leave, wedding leave and etc.) during the data collection were excluded from the study. A total of 105 nurses who met the inclusion were recruited for the study. Study was conducted in later part of 2018 for a period of six months and data collection was carried out using self-administered questionnaire (SAQ). Work-related stress among nurses was assessed using Perceived Stress Scale (PSS) developed by Cohen et al. (1983).¹⁵ It is a standard tool which is validated and used in Sri Lanka previously by Ilankoon et al. (2014).¹⁶ It is 5 point Likert scale which ranges from 0 (never) to 4 (very often). The total score ranges from 0-40 with a highest score indicating a higher perceived stress. The level of perceived stress was categorized as follows; 0-13 – low stress, 14-26 – moderate stress and 27-40 - high perceived stress. Based on the published literature on coping strategies, common coping strategies were assessed among participants which were listed in the questionnaire and participants were asked to choose.

Data collection was carried out during their off time, rest time and after ward-rounds without interrupting patient's care and ward routine activities. Data collection was conducted separately among the participants and each participant spent approximately 20-30 minutes to fill the questionnaire.

Collected data were coded and entered into SPSS (Version-21). Descriptive statistics were used to assess the stress and coping strategies used by the nurses.

The ethical clearance was obtained from the Ethics Review Committee, Faculty of Healthcare Sciences, Eastern University, Sri Lanka (ERC/2018/49). The participants were comprehensively informed about the purpose and nature of the study using the information sheets, and written informed consent was obtained from all participants.

Results

Nearly half of the participants were in the age group of 31-40 years (46%) and majority (74%) were females. Nearly 47% of them had a total of 201-300 duty hours per month. Around 50% of them stated that they have more workload in their unit and 40% them mentioned that they received good support from their superior.

Around 30% of nurses (n=31) had higher perceived stress level while 46% of them (n=48) had moderate stress level based on the perceived stress scale

Nearly 81% of them suggested that regular engagement in religious activities is the main coping strategy while 96% suggested that positive thinking was used to recover them from stressful events.

Nearly 69% of participants stated that time management and talk with friends/loved ones were the common problem-based coping strategies used by them to reduce their work-related stress.

Table 1: Socio-demographic and work-related details of participants (n= 105)

Variables	Category	n (%)
Age	21-30 Years	43 (41.0)
	31-40 Years	48 (45.7)
	41-50 Years	14 (13.3)
Gender	Female	78 (74.3)
	Male	27 (25.7)
Marital status	Married	69 (65.7)
	Unmarried	36 (34.3)
Duty hours per month	101-200	15 (14.3)
	201-300	49 (46.7)
	301-400	41 (39.0)
Workload in the unit	Yes	52 (49.5)
	No	32 (30.5)
	Neutral	21 (20.0)
Support of superior	Poor	35 (33.3)
	Fairly	21 (20.0)
	Good	42 (40.0)
	Very good	07 (6.7)
Social support	Poor	57 (54.3)
	Good	37 (35.2)
	Very good	11 (10.5)

Discussion

This preliminary study was conducted to determine the work-related perceived stress level among the nurses working at all critical care units in Ashraff Memorial Hospital in Kalmunai, Sri Lanka. The study revealed that nearly 30% of nurses had a higher perceived stress level, while 46% had moderate stress. Similarly, a study conducted among ICU/CCU nurses in Jordan¹⁷ and in United States¹⁸ reported that most of the nurses experienced higher levels of work-related stress. Critical care units are one of the most stressful clinical areas of a hospital. Critical care nurses often experience

Table 2: The level of the perceived stress of the participants

Perceived Stress Level	n (%)
Higher stress level	31 (29.5)
Moderate stress level	48 (45.7)
Lower stress level	26 (24.8)

Table 3: Emotion- focused coping strategies used by nurses (n=105)

* Coping strategies	n (%)
Engage in religious activities	85 (80.9)
Listen to music	81 (77.1)
Positive thinking	101 (96.2)
Relaxation practice	55 (52.4)
Exercise regularly	57 (54.3)
Eating healthy food	70 (66.7)
Time for hobbies and relaxation	68 (64.8)
Practice enough rest and sleep	60 (57.1)
Practice breathing exercises	68 (64.8)

*- Multiple responses were allotted

Table 4: Problem- focused coping strategies used by nurses (n=105)

*Coping strategies	n (%)
Create a to do list	61 (58.1)
Assertiveness	34 (32.4)
Time management	73 (69.5)
Set limits	68 (64.8)
Talking with peers/loved one	72 (68.6)
Engage in problem-solving	68 (64.8)

*- Multiple responses were allotted

higher work-related stress, generally due to fear of committing errors in highly technical and complicated nursing interventions and increased workloads due to understaffing. In addition, critical care nurses are challenged with a lot of difficult situations every day. Prolonged and constant stress lead to harmful effect on nurses' health, and further leads to organizational inefficacy and less job satisfaction¹⁹. Thus, nurses need to accept that there are situations which are beyond their control and responding to uncontrollable situations in a way that nurses thereby reducing their work-related stress.

Critical care nurses are often exposed to one of the stressors throughout the day, and if an appropriate coping strategy is not used, it may lead to physical, psychological, and social consequences in their life. Coping strategies are essential when attempting to

deal with the stress that nurses face daily. Further, developing coping strategies is an essential nursing skill to be used in stressful situations. In the present study, critical care nurses reported different types of emotion/problem focused coping strategies, in order to handle the stressful situations.

Among the different emotion-focused coping strategies reported by the critical care nurses, positive thinking was rated as a most frequent coping strategy used, especially during the stressful situations. Positive thinking can be effective in improving the function and reducing job stress of nurses, and has an impact on the behavior of people in terms of coping with stressful experiences and overcoming them.²⁰ In addition, engaging in religious activities was also reported as another common coping strategies among the nurses. Religious activities and a healthy spiritual activity would help improve the perception of nurses towards their working environment. Engaging in religious activities and spiritual interventions have proven to be effective means of coping with physical and mental stresses.²¹ Further, engaging in religious activities provides resources that foster coping with stressful events and supports positive emotions.²²

In addition, several problem-focused coping strategies have also been reported by the nurses in the current study. Engaging in problem solving strategy has been identified as one of the best ways to cope with work-related stress among critical care nurses. It was highlighted that problem solving is one of the most effective ways to deal with stress which involves focusing on altering or managing the problem.²³ Similarly, different studies conducted among nursing

students reported that problem solving is the most utilized coping strategy to cope with their stress.^{24,25}

Non-response bias was the limitation of the study as we did not get 100% respondent rate. Since self-administered questionnaire was administered, critical care nurses are probably less likely to respond it since they do not have free time to fill as they are always busy with caring the life-threatening cases.

Conclusions

The prevalence work-related perceived stress was high among the nurses at all critical care units in Ashraff Memorial Hospital, Kalmunai, Sri Lanka. Most of the nurses had used different emotion- focused coping strategies such as positive thinking, engaging in the religious activities, listening to music and problem focused coping strategies such as time management, talking with loved one for reducing work-related stress. These findings can set a firm basis for recognizing the level of work-related stress among nurses and their coping strategies to overcome the stress.

Primarily, the policy makers and administrators should take measures to reduce work-related stress associated with the shortage of staff, poor physical environment, inadequate training for staff and lack of facilities. In addition, nurse educators can develop plans to enhance nurses awareness on coping strategies for their stress reduction.

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References

1. Najimi A, Goudarzi AM, Sharifirad G. Causes of job stress in nurses: A cross-sectional study. *Iran J Nurs Midwifery Res.* 2012;17(4):301-5.
2. Practice Standards for Regulated Members, 2013. Available at: https://nurses.ab.ca/docs/default-source/document-library/standards/practice-standards-for-regulated-members.pdf?sfvrsn=d4893bb4_16, Accessed on 20th January 2019.
3. King KA, Vidourek R, Schwiebert M. Disordered eating and job stress among nurses. *Journal of Nursing Management*, 2009; 17(7):861–9.
4. Glazer S and Gyurak A. Sources of occupational stress among nurses in five countries. *International Journal of Intercultural Relations*, 2008; 32(1): 49–66
5. Scott L, Hwang W, Rogers A. The Impact of Multiple Care Giving Roles on Fatigue, Stress, and Work Performance among Hospital Staff Nurses. *Journal of Nursing Administration* 2006;36(2):86-95.
6. McMeekin DE, Hickman RL, Douglas SL, Kelley CG. Stress and coping of critical care nurses after unsuccessful cardiopulmonary resuscitation. *Am J Crit Care* 2017;26(2):128–35.
7. Foster GWD, Froehling S. Psychological response to situational stress in intensive and non intensive nursing. *Heart Lung* 1972;1(6):793-6.
8. Preto VA, Pedrão LJ. O estresse entre enfermeiros que atuam em Unidade de Terapia Intensiva [Stress among nurses who work at the intensive care unit]. *Rev Esc Enferm USP.* 2009 Dec;43(4):841-8.

9. Straub, R. O. (2007). *Health psychology: A biopsychosocial approach* (2nd ed.). New York, NY: Worth.
10. van der Heijden BIJM, Demerouti E, Bakker AB. Work-home interference among nurses: reciprocal relationships with job demands and health. *Journal of Advanced Nursing* 2008; 62(5),572–84.
11. Ilhan MN, Durukan E, Taner E, Maral I, Bumin MA. Burnout and its correlates among nursing staff: questionnaire survey. *Journal of Advanced Nursing* 2008; 61(1), 100–6.
12. Dominguez-Gomez E, Rutledge DN. Prevalence of secondary traumatic stress among emergency nurses. *Journal of Emergency Nursing* 2009; 35(3):199–204.
13. Schoenmakers EC, van Tilburg TG, Fokkema T. Problem-focused and emotion-focused coping options and loneliness: how are they related?. *Eur J Ageing* (2015) 12:153–61
14. Alenezi AM, Aboshaiqah A, Baker O. Work-related stress among nursing staff working in government hospitals and primary health care centres. *Int J Nurs Pract* 2018;24(5):e12676.
15. Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. *Journal of health and social behavior* 1983; 24: 385-96.
16. Ilankoon IMPS, Warnakulasooriya SSP. Perceived stress and associated factors among BSc nursing undergraduates in University of Sri Jayewardenepura, Sri Lanka. Proceedings of International Research Conference, General Sir John Kotelawala Defence University, Sri Lanka, 2014. <http://ir.kdu.ac.lk/bitstream/handle/345/1490/h012.pdf?sequence=1&isAllowed=y>.
17. Alhalaiqa F, Dweik G. Perceived stress in nurses: A comparative study. *Global J Health Sci.* 2017; 9(6): 195-203.
18. Oyeleye O, Hanson P, O'Connor N, Dunn D. Relationship of workplace incivility, stress, and burnout on nurses' turnover intentions and psychological empowerment. *J Nurs Adm.* 2013; 43(10): 536-42.
19. Isa KQ, Ibrahim MA, Abdul-Manan HH, Mohd-Salleh ZH, Abdul-Mumin KH, Rahman HA. Strategies used to cope with stress by emergency and critical care nurses. *Br J Nurs.* 2019;28(1):38-42.
20. Augusto-Landa JM, Pulido-Martos M, Lopez-Zafra E. Does perceived emotional intelligence and optimism/pessimism predict psychological well being?. *Journal of Happiness Studies* 2011; 12(3):463–74.
21. Cruz JP, Alshammari F, Alotaibi KA, Colet PC. Spirituality and spiritual care perspectives among baccalaureate nursing students in Saudi Arabia: A cross-sectional study. *Nurse Educ Today*, 2017; 49: 156-162.
22. Cruz JP, Alquwez N, Albaqawi HM, Alharbi SM, Moreno-Lacalle RC. Nurses' perceived spiritual climate of a hospital in Saudi Arabia. *Int Nurs Rev.* 2018 Dec;65(4):559-566.
23. Chinaveh M. The effectiveness of problem-solving on coping Skills and Psychological Adjustment. *Procedia - Social and Behavioral Sciences* 2013; 84:4 – 9.
24. Al-Zayyat AS, Al-Gamal E. Perceived stress and coping strategies among Jordanian nursing students during clinical practice in psychiatric/mental health courses. *Int J Ment Health Nurs.* 2014;23:326–35
25. Al-Gamal E, Alhosain A, Alsunaye K. Stress and coping strategies among Saudi nursing students during clinical education. *Perspect Psychiatr Care.* 2018;54:198–205.