Austin Gynecology Case Reports

Open Access

Austin Publishing Group

Research Article

The Beneficial Effects of Emotional Intelligence Training for Critical Care Nurses in Cairo, Egypt: A Quasi-Experimental Study

Abdel-Fattah HA[1], Sallam GK[2], Hendy AS[3]*, Abozeid A[4], Rodenhurst N[5]

[1]Fatima College of Health Sciences, United Arab Emirates
[2]Department of Obstetrics and Gynecology, UAE University College of Medicine and Health Sciences, United Arab Emirates
[3]Department of Paediatrics, Ain Shams University, Egypt
[4]Ain Shams University, Medical Surgical Nursing, Egypt
[5]Aberystwyth University, Wales

***Corresponding author:** Abdelaziz Said Hendy, Department of Paediatrics, Ain Shams University, Assistant Lecturer, Pediatric Nursing, Faculty of Nursing, Egypt

Received: February 22, 2021; **Accepted:** March 13, 2021; **Published:** March 20, 2021

Abstract

Background: Many critical care nurses commencing work in this environment may lack resilience, and because of the stress of the critical care environment, coping mechanisms need to be developed.

Research Aims: To discover whether emotional intelligence training for nurses at critical care units in Cairo, Egypt may alleviate the problem of job burnout.

Methodology: A Quasi-experimental study was conducted at two critical care units: a Cardiac Surgery Academy and El Demerdash Hospital "Cardiac care unit and intensive care unit", both of which are affiliated to Ain Shams University, Egypt, Cairo. The subjects were 200 critical care nurses. A self-administered questionnaire containing three parts (demographic data of nurses, Wong and Law Emotional Intelligence Scale and Maslach burnout inventory).

Results: There was marked improvement in all domains of emotional intelligence scores among the nurses after the training. There was marked improvement in all domains of the burnout scale scores of the nurses' surveys post intervention. Marital status, experience, and emotional intelligence were all seen to be predictors of higher burnout rates.

Conclusions: The present study revealed that emotional intelligence training had a positive impact on nurses' experience of job burnout.

Keywords: Burnout; Emotional intelligence; Critical care nursing

Introduction

Critical care nurses work in an exceptional environment where they are expected to make life and death decisions while facing highly stressful situations and ethical dilemmas daily. The emotional and physical burden on critical nurses is growing due to fluctuations in the demands of patients and organizations, shortage of resources, and the growing number of critically ill patients; these factors may lead to the burnout of critical care nurses [1]. Burnout is caused by emotional distress and labor, depersonalization, feelings of failure, stress due to diseases, discouragement, dissatisfaction with the job, diminished quality of care, and struggles with staff members and patients [2].

Critical care nursing involves caring for patients who are suffering from life-threatening illnesses or injuries, while at the same time offering comfort and support to their family members [8]. Thus, critical care nurses experience major emotional labor as they manage their own emotions, as well as those of their patients and their significant others, placing further demands on the caregiver [4].

Emotional intelligence mostly refers to the competence to identify, express and understand emotions, assimilate emotions in thought and to reflectively regulate both positive and negative emotions in the self and others [5]. Emotional intelligence is a factor increasingly studied among health professionals and in other disciplines, where it is suggested that it is essential for the mental health of professionals, as well as for effective performance [6].

Deficiency of emotional preparedness causes stress and burnout, with nurses consequently leaving the critical care environment or the profession. Imani et al. [7] found that emotional intelligence training for Iranian nurses improved client/patient satisfaction and health. Emotional intelligence diminishes the effects of burnout in nurses and promotes their feelings of ownership towards their work. Al-Hamdan, Adnan Al-Ta'amneh, Rayan & Bawadi [8] found that emotional intelligence training for nursing managers in Iran improved their ability to manage conflict and stress in the workplace.

Burnout syndrome is a state of mental, emotional, and physical fatigue caused by extreme and prolonged stress. This exhaustion is typically work-related and is often prompted by differences between a worker's expectations and actual requirements of the job. Critical care nurses and their unit coworkers have some of the highest rates of burnout syndrome, which can negatively affect clinicians' health and patient care. A recent study from Saudi Arabia showed that 25 to 33 percent of critical nurses manifested symptoms of severe burnout syndrome [9]. A study from Canada showed that burnout among critical care staff is associated with diminished quality of care, the dissatisfaction of patients, increased medical errors, higher rates of nosocomial infection, and higher 30-day patient mortality rates [10,11].

Citation: Abdel-Fattah HA, Sallam GK, Hendy AS, Abozeid A, Rodenhurst N. The Beneficial Effects of Emotional Intelligence Training for Critical Care Nurses in Cairo, Egypt: A Quasi-Experimental Study. Austin Gynecol Case Rep. 2021; 6(1): 1025.

Aims

This study aimed to evaluate the effect of emotional intelligence training on job burnout for nurses at the critical care units through:

- Assessing instances of job burnout at critical care units in Cairo, Egypt.
- Assessing nurses' emotional intelligence at critical care units in Cairo, Egypt.
- Assessing the effect of emotional intelligence training on job burnout instances at critical care units in Cairo, Egypt.

Research hypothesis:

- There is a positive impact of emotional intelligence training on emotional intelligence and burnout rates for nurses at critical care units in Cairo, Egypt.

Methods

Research design: A quasi-experimental design was utilized. From October 2019-February 2020.

Research Setting: The study was carried out at critical care units at the Cardiac Surgery Academy, which contains the "Cardiac care unit and Intensive care unit" and El Demerdash Hospital, which has a "Cardiac care unit and intensive care unit", both of which are affiliated to Ain Shams University Egypt, Cairo.

Subjects: The subjects were all the available nurses who worked in the abovementioned settings and the study-200 nurses who provided care for patients regardless of their age, gender, qualification, and experience.

Sample size: The estimated sample size was 200 nurses, at confidence level 99%, and the precision rate at 0.05 by using the equation devised by Thompson [12] as the total number of available nurses is 275.

P= 0.5, N= Total population, Z= Z value "1.96", D= Standard Error, n= sample size

Data collection: Data was collected through a self-administered questionnaire containing three parts developed by the researchers:

Part I: This part included questions related to demographic characteristics of the subjects such as age, gender, marital status, qualifications, experience, working hours, income, and residence.

Part II: Wong and Law Emotional Intelligence Scale (WLEIS): This was developed by Wong and Law [13] to measure nurses' emotional intelligence. It includes 16 items grouped equally into four main dimensions: emotional self-appraisal, emotional appraisal of others, use of emotion and regulation of emotion.

Responses were measured on a 5-point Likert scale ranging from (1) strongly disagree to (5) strongly agree. The overall score would therefore range from (16-80).

Part III: Maslach burnout inventory: Adopted from Maslach et al. [17], this was used to assess nurses' burnout levels. It includes 22 items grouped into emotional fatigue (9 items), personal fulfillment (8 items), and depersonalization (5 items).

Scoring system: Responses were measured on a 5-point Likert scale ranging from (1) every day to (5) never. The overall score would therefore range from (22-110).

Pilot study: The pilot study was conducted with 20 nurses who represent 10% of nurses at the previously mentioned settings in order to test the applicability of the constructed tools and the clarity of the included tools. The pilot also served to estimate the time needed for each subject to fill in the questionnaire.

A group of experts in the critical care-nursing departments ascertained the content's validity and reliability. Their opinions were elicited regarding the format, layout, consistency, accuracy, and relevancy of the tools. Reliability pretesting was carried out to test the reliability in terms of Cronbach's Alpha for Wong and Law Emotional Intelligence Scale = 0.797 and Cronbach's Alpha for Maslach burnout inventory = 0.824.

Delivery of emotional intelligence training

Assessment phase: Before training the researchers assessed the needs of the nurses. During the first session, the researcher explained the aim of the study and the components of the tools. The educational program was prepared and designed according to the nurses' level of emotional intelligence and burnout.

Intervention and evaluation phase: The subjects were divided into five groups. Each group trained for five, two-hour sessions in the form of conference, questions and answers sessions with psychological experts and the researchers, and nurses were provided with literature. These two-hour sessions were as follows:

First session: The nurses were introduced to each other and were informed about the structure and method of the sessions. The nurses' expectations from the training program were identified, and the nurses completed the questionnaires.

Second session: Emotional intelligence and its components (15 components of emotional intelligence scale, stress relief plans) were explained and discussed. First, the nurses were trained in ways of adjustment to stressful factors and surroundings.

Third session: The nurses were introduced to the concept of emotional self-discipline, expression of feelings and affection, and methods of changing instilled concepts.

Fourth session: Emotional self-control, the priority of impartiality over personal beliefs, coping abilities, and relaxation therapy were taught to the nurses.

Fifth session: The nurses were trained on emotional refinement, different emotional intelligence techniques, and the use of emotional intelligence; then, they were asked to fill out the questionnaires. The sessions ended after trainers responded to the nurses' questions. At the end of the intervention, nurses completed questionnaires. The questionnaires were collected and information, concerning emotional intelligence and burnout, was extracted, as described above.

Data collected from the studied sample was revised, coded, and entered using Personal Computer (PC). Computerized data entry and statistical analysis were fulfilled using the Statistical Package for Social Sciences (SPSS) version 22. Data were presented using descriptive statistics in the form of mean and SD. A linear regression

model is a linear approach to modeling the relationship between a scalar response and one or more explanatory variables. T. test was used to compare means pre and post-intervention.

Ethical considerations: Each nurse was informed about the purpose and benefits of the study in the first part before participation at the study, where every one can't be starting the questionnaire without consent to participate in data collection in the current study. Revised through Ethical committee at Benha University Research Ethics Committee (REC) At July 2019. The nurses were assured that all data was used for research purpose only and each one was informed of the rights to refuse participation in the study or withdraw at any time before completing the questionnaire with no consequences.

Results

Table 1 reveals that mean age of subjects was 32.45 ± 6.8, 80% of them were female and 65% of them were married. It also shows that 61% of the subjects had a technical nursing degree, mean of years' experience was 7.43 ± 5.1 and 74% of them had insufficient income. The table also shows that 60% of studied nurses were full time.

Table 2 demonstrates that there was marked improvement in all domains of emotional intelligence scores of the subjects at post intervention with p value<0.01. Mean score of total emotional intelligence pre intervention was 19.95 ± 6.30 while post intervention was 36.4 ± 9.57, a significant difference at p value<0.01.

Table 3 reveals that there was marked improvement in all domains of burnout scale scores among the subjects at post intervention with p value<0.01. The mean score of total burnout scale pre intervention was 59.61 ± 19.58, while post intervention it was 89.9 ± 19.6, with high significant difference at p value<0.01.

Table 4 shows that there was a highly negative correlation between burnout scale and emotional intelligence at p value<0.01.

Discussion

Regarding the emotional intelligence of critical care nurses, there was a marked improvement in all domains "Self-emotion appraisal, Others' emotional appraisal, Use of emotion, Regulation of emotion" of the emotional intelligence scores of the subjects at post intervention with p-value<0.01. This improvement was due to the lack of previous training and possibly critical care nurses' reluctance to obtain information about the concept of emotional self-discipline, self-control, coping strategy, and using visual aids to clarify the information. It is also consistent with an international study conducted by Kozlowski et al. [15] which concluded that research generally supports the need for emotional intelligence training and the effectiveness of even a short intervention in pressurized medical settings.

Also, supported by the study conducted by Vahidi et al. [22], which detected that following a similar intervention, the emotional intelligence scores were higher in comparison with the pre-intervention period in the intervention group of registered nurses in Iran. It is also consistent with the study conducted by Meng & Qi [18], which reported that around two-thirds of student nurses had higher emotional intelligence scores at the end of the study conducted in China.

Regarding the burnout of nurses at critical care units, the present study demonstrated that there was a marked improvement in all domains of burnout scale among the subjects at post intervention with p-value<0.01. The mean score of total burnout scale pre-intervention was 59.61 ± 19.58, while post-intervention was 89.9 ± 19.6, a hugely significant difference at p-value<0.01. These results may be due to an effective educational program about; emotional intelligence, how to cope with self-control, to use straightforward language, and concepts pitched at a level consistent with their previous learning experiences. These results were not matched in a study by Antoun et al. [4] which focused on internal medicine residents at a hospital in Beirut. Burnout levels were not reduced, but this study used Balint seminars, which may have been an unfamiliar learning environment for the subjects to adapt to. Our results were, however, consistent a the study performed by Gozalo et al. [10] about the application of a mindfulness program among healthcare professionals in an intensive care unit, which revealed that application of intervention had a highly positive effect on burnout of nurses at an intensive care unit.

Regarding the correlation between the nurses' emotional intelligence and their burnout scale scores, the current study revealed that there was a highly negative correlation between burnout scale and emotional intelligence at p-value<0.01. These results support those of Samaei et al's, [19] study, which found that there was a high negative correlation between emotional intelligence and burnout of nurses in Iran. Aldaz et al, [1] also found a clear association between alexithymia, emotional intelligence, and burnout among nursing assistants working in nursing home settings in Spain.

Concerning the linear regression model of burnout, the present study revealed that being married, less experience, and lower emotional intelligence were predictors of higher scores on the burnout scale (p= <0.01). Educational level, residence, and income had a slight effect on the burnout scale. These results supported those of Szczygiel & Mikolajczak [21], who demonstrated that emotional intelligence had a high impact on burnout of nurses in Spain. However, gender did not have a significant impact on burnout scale (p=0.087) in our study.

Regarding linear regression of emotional intelligence, the current study detected that educational level, income, experience, and burnout scale were predictors of emotional intelligence (p= <0.01). Age and being married had some effect on emotional intelligence with p-value<0.05. However, gender and had little impact on emotional intelligence (p>0.05). These results support the findings of Hong & Lee [11], who found that experience and education level had a high effect on emotional intelligence among nurses in Korea. In addition, Chen & Chen [7] found that experience and stress had a significant effect on emotional intelligence among nurses in Taiwan.

Conclusion

To conclude, the present study revealed that emotional intelligence training had a positive impact on critical care nurses' burnout rates in critical care settings in Cairo, Egypt. It also found that demographic factors including age, experience and marital status had an impact on emotional intelligence levels among the subjects.

Funding: Self-funding, without any external source.

References

1. Welch TD, Carter M. Expertise among critical care nurses: A grounded theory study. Intensive and Critical Care Nursing. 2020; 57: 102796.
2. Jarden RJ, Sandham M, Siegert RJ, Koziol-McLain J. Intensive care nurses' well-being: A systematic review. Australian Critical Care. 2020; 33: 106-111.
3. Filho FA, Rodrigues MC, Cimiotti JP. Burnout in Brazilian intensive care units: a comparison of nurses and nurse technicians. AACN advanced critical care. 2019; 30: 16-21.
4. Friganovic A, Selic P, Ilic B, Sedic B. Stress and burnout syndrome and their associations with coping and job satisfaction in critical care nurses: A literature review. Psychiatr. Danub. 2019; 31: 21-31.
5. Yekefallah L, Dehghankar L, Shafaei M, Yekefallah F. Comparing the Relationship of Emotional Intelligence and General Health in Nurses of Intensive Care Units With General Units in Qazvin. International Journal of Epidemiologic Research. 2019; 6: 36-41.
6. Lewis SL. Emotional Intelligence in Neonatal Intensive Care Unit Nurses: Decreasing Moral Distress in End-of-Life Care and Laying a Foundation for Improved Outcomes: An Integrative Review. Journal of Hospice & Palliative Nursing. 2019; 21: 250-256.
7. Imani B, Kermanshahi SMK, Vanaki Z, Lili AK, Zoghipaydar M. Iranian hospital nurses' lived experiences of emotional intelligence: a phenomenological study. Issues in Mental Health Nursing. 2019; 40: 712-719.
8. Al-Hamdan Z, Adnan Al-Ta'amneh I, Rayan A, Bawadi H. The impact of emotional intelligence on conflict management styles used by jordanian nurse managers. Journal of nursing management. 2019; 27: 560-566.
9. Alharbi J, Wilson R, Woods C, Usher K. The factors influencing burnout and job satisfaction among critical care nurses: a study of Saudi critical care nurses. Journal of nursing management. 2016; 24: 708-717.
10. Browning SG. Burnout in Critical Care Nurses. Critical Care Nursing Clinics. 2019; 31: 527-536.
11. Buckley L, Christian M, Gaiteiro R, Parhuram CS, Watson S, Dryden-Palmer KAREN. The relationship between pediatric critical care nurse burnout and attitudes about engaging with patients and families. Canadian Journal of Critical Care Nursing. 2019; 30.
12. Steven K. Thompson. Sampling' 3rd edition. John Wiley & Sons. 2012; 59-60.
13. Wong CS, Law KS. The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. The leadership quarterly. 2002; 13: 243-274.
14. Maslach C, Jackson SE, Leiter MP, Schaufeli WB, Schwab RL. Maslach burnout inventory. Palo Alto, CA: Consulting psychologists press; 1986.
15. Kozlowski D, Hutchinson M, Hurley J, Browne G. Increasing nurses' emotional intelligence with a brief intervention. Applied Nursing Research. 2018; 41: 59-61.
16. Sabzevar AV, Sarpoosh HR, Esmaeili F, Khojeh A. The effect of emotional intelligence training on employed nurses. Journal of Nursing and Midwifery Sciences. 2016; 3: 46-53.
17. Meng L, Qi J. The effect of an emotional intelligence intervention on reducing stress and improving communication skills of nursing students. NeuroQuantology. 2018; 16: 37-42.
18. Antoun J, Akl IB, Halabi Z, Khalil PB, Romani M. Effect of Balint seminars training on emotional intelligence and burnout among internal medicine residents. Health Education Journal. 2020: 0017896920911684.
19. Gozalo RG, Tarres JF, Ayora AA, Herrero MA, Kareaga AA, Roca RF. Application of a mindfulness program among healthcare professionals in an intensive care unit: Effect on burnout, empathy and self-compassion. Medicina Intensiva (English Edition). 2019; 43: 207-216.
20. Samaei SE, Khosravi Y, Heravizadeh O, Ahangar HG, Pourshariati F, Amrollahi M. The effect of emotional intelligence and job stress on burnout: A structural equation model among hospital nurses. International journal of occupational hygiene. 2017; 9: 52-59.
21. Aldaz E, Aritzeta A, Galdona N. The association between alexithymia, emotional intelligence and burnout among nursing assistants working in nursing home settings: A cross-sectional study. Journal of Advanced Nursing. 2019; 75: 2786-2796.
22. Szczygiel DD, Mikolajczak M. Emotional intelligence buffers the effects of negative emotions on job burnout in nursing. Frontiers in psychology. 2018; 9: 2649.
23. Hong E, Lee YS. The mediating effect of emotional intelligence between emotional labour, job stress, burnout and nurses' turnover intention. International journal of nursing practice. 2016; 22: 625-632.
24. Chen SC, Chen CF. Antecedents and consequences of nurses' burnout. Management Decision. 2018.
25. Halbesleben JR, Savage GT, Wakefield DS, Wakefield BJ. Rework and workarounds in nurse medication administration process: implications for work processes and patient safety. Health care management review. 2010; 35: 124-133.