

Stress, Burnout, and Job Satisfaction of Critical Care Nurse Educators.

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Abstract:

Introduction: There are multiple challenges facing the critical care nurse educators encountered in both the classrooms and the clinical environment that could provoke the educators' stressors starting a vicious cycle of burnout and job dissatisfaction. The consequences of stress, burnout, and job dissatisfaction have serious implications for critical care nurse educators directly, students, educational institutions, and ultimately the profession indirectly.

The aim of the study is to identify the stress, burnout, and job satisfaction levels of the critical care nurse educators.

Materials and Method: Critical care nurse educators were interviewed individually and asked to rate their job stress, burnout, and job satisfaction levels. Three tools were used to collect the data from different four academic institutions.

Results: Critical care nurse educators experienced a moderate level of both job stress and burnout with a low level of job satisfaction.

Conclusion: Critical care nurse educators in the different four academic institutions faced multiple challenges which could contribute to job stress, burnout and dissatisfaction.

Keywords: Job stress- Burnout – Job satisfaction- Critical care nurse educators

Date of Submission: 13-11-2018

Date of acceptance: 28-11-2018

I. Introduction

The academic educators are the cornerstone of the learning process. They would directly affect the students' achievement. Despite the fact that the academic jobs are associated with high freedom and control which make these jobs non-stressful, critical care nursing education is considered a stressful job⁽¹⁾. There are multiple challenges facing the critical care nurse educators encountered in both the classrooms and the clinical environment that could provoke the educators' stressors starting a vicious cycle of burnout and job dissatisfaction⁽²⁾. Prolonged exposure to work stressors with high work demands within a stressful environment can lead to inappropriate stress response which may lead to imbalance in homeostasis, and breakdown of the biological system. This in turn prevents compensatory changes that help in coping, thereby resulting in academics' burnout. Based on the conservation of resources theory, burnout could directly affect the health outcomes through the depletion of resources necessary for coping, and decreasing the work productivity. Thereby leading to negative state of job satisfaction^(3,4).

Work stress could be in the form of three domains; increase the work demand, lack of control over the work, and loss of support. Critical care nursing specialty has a distinctive nature as it deals with patients experiencing life threatening conditions. Critical care nurse educators have the responsibility for building students' practical skills, problem solving and critical thinking skills, leadership, and clinical judgment through ongoing learning and reflective practice in a context of over-crowded, stressful work ICU environment. Critical care nurse educators experience several work stressors including increase the workload, lack of resources, multiple roles and responsibilities which can lead to role conflicts, conflict with peers and supervisors, high job demands and responsibilities in terms of patients' critical condition. Also, they have to develop themselves continuously and being competent for teaching and training their students. These stressors in addition to staff shortage, unsatisfied payment, unusual procedures, work overtime, intensity and students' responsibility in which critical care nurse educators have to improve learning process while ensuring patients' safety through declining unsafe novice students' practices⁽⁵⁻⁷⁾.

Critical care nurse educators who have a combination of the ICU environment stressors and other stressors on the academic level have the liability to **burnout** to occur. The prolonged exposure to professional stress and the absence of strategies that could neutralizing stressors are contributing to the professional burnout syndrome. Burnout is arising from prolonged experience of long-term and extensive exhaustion with lack of interest in the work context. It always results from prolonged exposure of professionals especially critical care nurse educators to too much effort at their work while having too little support^(2,8). It represents the inability of critical care nurse educators to cope with work stressors with excessive use of energy leading to feelings of exhaustion and failure⁽⁹⁾. Burnout consists of three main components; emotional exhaustion, depersonalization and lack of personal accomplishment. Emotional exhaustion is the fatigued feeling that develops as emotional energy is drained. Once these feelings exist, critical care nurse educators experience depersonalization. This feeling is associated with educators' perception of inability to help their students in the learning process. At this point, educators may experience a lack of personal accomplishment as they no longer feel a contribution to their students' development⁽¹⁰⁾.

Burnout is a phenomenon of both physical and psychological manifestations which result in decreased effectiveness and productivity. Burnout syndrome is characterized by clinical symptoms such as mental fatigue, lack of motivation, emotional instability, irritability, insomnia, headaches, musculoskeletal problems, tiredness, low productivity and absenteeism, job turnover, rigidity in relationships with other people and lack job satisfaction^(10,11).

Critical care nurse educators carry great responsibility related to their students' competencies as well as to patients' safety, in addition to, their organizations. They must teach, train and counsel students, yet high level of responsibility with low decision-making power could in turn, cause decrease in their **job satisfaction** level⁽¹⁰⁾. Job satisfaction of critical care nurse educators has been affected by the productivity, lack of positive reinforcement and dissatisfying workplace⁽¹²⁾. Herzberg's in his theory relate the satisfaction of educators to hygiene and motivator factors. In which the hygiene factors include, interpersonal relations between supervisors, subordinates and colleagues, payment, administrative authorities, job security, and working conditions. While, the motivator factors, include, achievement, possibility of growth, advancement, recognition, responsibility and work itself⁽¹³⁾. However, the general work condition, use of skills and abilities, payment and promotions, work relations and the work activities are the overall determinants of the job satisfaction level of critical care nurse educators⁽¹⁴⁾.

The consequences of stress, burnout, and job dissatisfaction have serious implications for critical care nurse educators directly, students, educational institutions, and ultimately the profession indirectly. Whilst the profession in need for highly qualified nurses to face the world-wide shortage of critical care nurses, satisfaction of critical care nurse educators is essential to graduate a qualified critical care nurses that is sufficient to sustain the professional workforce in ICUs. However, several researchers were interested in studying different aspects of the educational process such as the students, the environment, the teaching strategies, or the content⁽¹⁵⁻¹⁸⁾. Others focused on the nurses' stressors, burnout, or satisfaction especially who worked in the critical care settings^(9,14,19). Up to our knowledge, there are no national studies concerned with the educators especially in the critical care nursing specialty. In this context, it is crucial to study stressors, burnout, satisfaction of critical care nurse educators.

Research question: What are the stress, burnout, and job satisfaction levels of the critical care nurse educators?

Aim of study: to identify the stress, burnout, and job satisfaction levels of the critical care nurse educators.

II. Materials and method

Research design: A descriptive design was used in this study.

Settings: This study was conducted in the Critical Care and Emergency department - Alexandria University, the Critical Care and Emergency department - Damnhour University, the medical-surgical and Critical care nursing department - Bani-Swief University and the Critical Care and Emergency department - Mansoura University.

Subjects: A convenience sample of 70 critical care nurse educators including professors, assistant professors, lecturers, assistant lectures, clinical demonstrators and instructors who were working in the previously mentioned settings were included in this study. Only those who have been agreed to participate in this study. Educators from different settings who refused to participate in this study, they were excluded.

Tools for data collection:

Three tools were used for data collection.

Tool one: The short version of Job stress scale. This tool was adopted by the researcher from De Mello Alves et al (2004) ⁽²⁰⁾ with internal consistency (Cronbach's alpha) ranged from 0.63 to 0.86 to assess critical care educators' job related stressors. It consists of three sections; demand (5 items), control (6 items) and support (5 items). It includes three sections as follows:

1. **Demand** which refers to pressure of psychological nature and includes questions about the work speed, efforts, time and conflicting demands.
2. **Control** which refers to job decision latitude, the possibility an educator has of employing his or her intellectual abilities in performing job-related tasks, as well as the degree of authority the worker has for making decisions about how to perform such tasks. It includes questions related to the demands of work, the possibility for acquiring new skills, and the freedom in deciding what and how to work.
3. **Support** which is concerned with the level of social interaction between critical care nurse educators and colleagues/superiors. It includes questions that reflect the atmosphere of work, and interactions with peers, and superiors.

Each item in this scale is scored using a five likert scale; always (5), often (4), sometimes (3), rarely (2) and never (1).

In addition to critical care educators' demographic data such as sex, age, marital status, educational degree, job title, years of department experience and total experience.

Tool two: Maslach burnout inventory. This tool was originally developed by Maslach C and Susan E (1982) ⁽²¹⁾ to assess the occupational burnout through introspective psychological inventory consisting of 22 items. The used version in this study (the Dutch version of the Maslach Burnout Inventory for Educators, the mbi-nl-es) was adapted from Horn, J.E. van and Schaufeli, W.B. (1998) ⁽²²⁾. In which each item in this inventory is scored using a five likert scale; always (5), often (4), sometimes (3), rarely (2) and never (1).

Tool three: Job satisfaction level. This tool was adapted by the researcher from Salisbury University ⁽²³⁾ to assess critical care nurse educators' job satisfaction level. It consists of five categories; general working conditions (6 items), pay and promotion potential (5 items), work relationships (3 items), use of skills and abilities (3 items) and work activities (4 items). Each item of each category is scored using a three likert scale; not satisfied at all scored (1), somewhat satisfied scored (2), and extremely satisfied scored (3).

Method:

An official letter was directed from the Faculty of Nursing, Alexandria University to administrative authority of each of the four universities in order to obtain their acceptance to collect the necessary data from the selected departments. Permission was obtained from all critical care nurse educators participated in the study after providing an explanation of the study aim. Content validity was done by five experts in the field of study (2 in nursing education and 3 in nursing practice). A pilot study was carried out to assess the feasibility and applicability of the study tools. It was performed on 10% of the study subjects. The subjects involved in the pilot study were excluded from the study. The necessary modifications were done accordingly.

Data collection:

An appointment was scheduled with each critical care nurse educator in each institution of the four institutions to be interviewed individually by the researcher after the working time. Each interview took approximately from 30 to 45 minutes. Critical care nurse educators' demographic information was obtained firstly, and then they were asked to rate their Job stress, and burnout levels using tool one and two. Each critical care nurse educator was asked to choose one answer from a 5- point Likert scale always (5), often (4), sometimes (3), rarely (2) and never (1). After that, tool three (Job satisfaction level) was distributed to the critical care nurse educators who were asked to point their satisfaction level on a three likert scale; not satisfied at all scored (1), somewhat satisfied scored (2), and extremely satisfied scored (3) and to bring it back to the researcher. Data were collected by the researcher during approximately six months starting from January 2018 to June 2018.

Ethical considerations:

The researcher explained the objectives of the study orally to the critical care nurse educators, additionally to the written explanations on the covering letter of the questionnaire. The anonymity and confidentiality of responses, voluntary participation and right to refuse to participate in the study were emphasized to critical care nurse educators. Only four universities had the willing to participate in the current study.

Statistical Analysis:

Data were fed to the computer and analyzed using IBM SPSS software package version 20.0. (Armonk, NY: IBM Corp). Qualitative data were described using number and percent. Quantitative data were described

using mean, standard deviation. Significance of the obtained results was judged at the 5% level. Chi-square test was used for categorical variables, to compare between different groups, Monte Carlo correction; Correction for chi-square when more than 20% of the cells have expected count less than 5 and F-test (ANOVA) was used for normally distributed quantitative variables, to compare between more than two groups.

III. Results

Table (I) shows the distribution of the critical care nurse educators according to their personal and academic characteristics. Regarding *sex*, it can be observed that most of the studied educators in the Alexandria, Damanhur, Mansoura and Bani-Swief university (87.1%, 100%, 95% and 66.7% respectively) were female. No significant statistical difference between the four studied groups ($P=0.120$) were found in relation to *age*. As regard *job title*, 35.5% of the Alexandria group of educators were clinical instructors, 40%, 65% and 55.6% of the Damanhur group, the Mansoura group and the Bani-Swief group of critical care nurse educators were demonstrators respectively. In relation to *marital status*, 70.0%, 90.0 and 100.0% of the Damanhur group, the Mansoura group and the Bani-Swief group of educators were married respectively, and only 48.4% of the Alexandria university group of educators were married. This table shows also the *educational degree* of the educators in which 51.6, 70% and 65% of the critical care nurse educators had BCS in the Alexandria, Damanhur, and the Mansoura universities respectively. Whereas, 66.7% of the critical care nurse educators had a master degree in the Bani-Swief university. Most of the studied critical care nurse educators were living with their families in the four academic institutions (80.6, 60%, 85%, and 88.9%) respectively. There was no significant statistical difference between the four groups of critical care nurse educators neither in the department *experience* nor the total years of experience ($P=0.229$ and 0.106) respectively.

Table (II) presents the distribution of the studied critical care nurse educators according to their job stress, burnout and satisfaction levels in four academic institutions. Regarding the critical care nurse educators' *job related stress*, it was observed that the educators had a moderate level of job related stress in the Alexandria, Damanhur, Mansoura and Bani-Swief universities (83.9%, 100.0%, 75%, and 100%) respectively with no statistical significant difference between the four groups ($P=0.625$). In relation to the *occupational burnout* of the critical care nurse educators using the Maslach Burnout inventory, it can be observed that most of the educators had a moderate level of burnout in the Alexandria, Damanhur, and Bani-Swief universities (83.9%, 80.0%, 75%, and 77.8%) respectively. Whereas, only half of the studied educators in the Mansoura university had a moderate level of burnout and 30% of them had a high level of burnout. However, there was no statistical significant difference between the four groups ($P=0.056$). Concerning the *job satisfaction level*, above three quarters of the educators had a low level of job satisfaction in the Alexandria university (77.4%), the Mansoura university (75%) and the Bani-Swief university (88.9%). Half of the studied educators had a low level of job satisfaction in the Damnhour university (50%), 30% of them had a moderate level of job satisfaction and only 20% of them had a high level of job satisfaction with no statistical significant difference between the groups of educators ($P=0.296$).

Figure (1) illustrates a comparison between the four studied groups of educators regarding the mean of job stress subcategories. It can be observed that Alexandria university critical care nurse educators has the highest mean of job demand (74.03 ± 14.17) followed by Damnhour university critical care nurse educators (69.0 ± 11.50). It can be observed also, that Ban-sweif university critical care nurse educators had the least control over their work (69.0 ± 11.50). Mansoura university critical care nurse educators had the highest mean of work support among the four group of educators (65.75 ± 20.60).

Figure (2) depicts a comparison between the four studied groups of educators regarding the mean of job satisfaction subcategories. It was found that critical care nurse educators in Damnhour university had the highest mean of satisfaction related to general working and pay and promotion (65.0 ± 25.09) and (37.0 ± 29.46) respectively. Regarding the work relation and use of skills and abilities, critical care nurse educators in Mansoura university had the least mean of satisfaction (43.33 ± 25.01) and (37.50 ± 26.97) respectively. Related to satisfaction with the work activity, critical care nurse educators in Alexandria university had the least mean of satisfaction (33.06 ± 21.54).

Table (I): Distribution of the studied critical care nurse educators according to their characteristics

Characteristics	Groups								Significance	
	Alexandria (n = 31)		Damanhur (n = 10)		Mansoura (n = 20)		Bani-Swief (n = 9)		Test of Sig.	P
	No.	%	No.	%	No.	%	No.	%		
Sex										
Female	27	87.1	10	100.0	19	95.0	6	66.7	$\chi^2 = 5.047$	MC p = 0.104
Male	4	12.9	0	0.0	1	5.0	3	33.3		
Age (years)	34.45 ± 13.0		28.70 ± 5.33		29.50 ± 6.38		27.56 ± 2.92		F = 2.019	0.120
Job Title										
Instructor	11	35.5	3	30.0	0	0.0	0	0.0	$\chi^2 = 28.874^*$	MC p = 0.002*
Demonstrator	7	22.6	4	40.0	13	65.0	5	55.6		
Assistant lecturer	4	12.9	2	20.0	4	20.0	4	44.4		
Lecturer	6	19.4	0	0.0	3	15.0	0	0.0		
Assistant professor	0	0.0	1	10.0	0	0.0	0	0.0		
Professor	0	0.0	0	0.0	0	0.0	0	0.0		
Professor Emeritus	3	9.7	0	0.0	0	0.0	0	0.0		
Marital status										
Single	14	45.2	3	30.0	2	10.0	0	0.0	$\chi^2 = 14.253^*$	MC p = 0.008*
Married	15	48.4	7	70.0	18	90.0	9	100.0		
Others	2	6.5	0	0.0	0	0.0	0	0.0		
Educational degree										
BCS	16	51.6	7	70.0	13	65.0	3	33.3	$\chi^2 = 9.870$	MC p = 0.104
Master	6	19.4	2	20.0	4	20.0	6	66.7		
PhD	9	29.0	1	10.0	3	15.0	0	0.0		
Living condition										
On their own	5	16.1	3	30.0	3	15.0	0	0.0	$\chi^2 = 6.325$	MC p = 0.303
With families	25	80.6	6	60.0	17	85.0	8	88.9		
With friends	1	3.2	1	10.0	0	0.0	1	11.1		
Department experience	8.32 ± 6.98		5.40 ± 4.60		5.70 ± 4.21		5.33 ± 1.66		F = 1.478	0.229
Total experience	11.77 ± 11.94		6.50 ± 5.66		6.35 ± 5.0		6.56 ± 3.09		F = 2.118	0.106

BCS: Bachelor of Science PhD: philosophy of doctoral degree F: ANOVA test

χ^2 : Chi square test MC: Monte Carlo p: p value for comparing between the four groups

*Statistically significant at $p \leq 0.05$

Table (II): Distribution of the studied critical care nurse educators according to their job stress, burnout and satisfaction level in four academic institutions.

Scale	Groups								Significance	
	Alexandria (n = 31)		Damanhur (n = 10)		Mansoura (n = 20)		Bani-Swief (n = 9)		χ^2	MC p
	No.	%	No.	%	No.	%	No.	%		
Job stress scale										
Low (16 – 48)	2	6.5	0	0.0	1	5.0	0	0.0	4.211	0.625
Moderate (49 – 64)	26	83.9	10	100.0	15	75.0	9	100.0		
High (65 – 80)	3	9.7	0	0.0	4	20.0	0	0.0		
Maslach Burnout inventory										
Low (22 – 66)	4	12.9	2	20.0	4	20.0	2	22.2	10.760	0.056
Moderate (67 – 88)	26	83.9	8	80.0	10	50.0	7	77.8		
High (89 – 110)	1	3.2	0	0.0	6	30.0	0	0.0		
Job satisfaction										
Low (21 – 42)	24	77.4	5	50.0	15	75.0	8	88.9	6.535	0.296
Moderate (43 – 52)	6	19.4	3	30.0	5	25.0	1	11.1		
High (53 – 63)	1	3.2	2	20.0	0	0.0	0	0.0		

χ^2 : Chi square test

MC: Monte Carlo

p: p value for comparing between the four groups

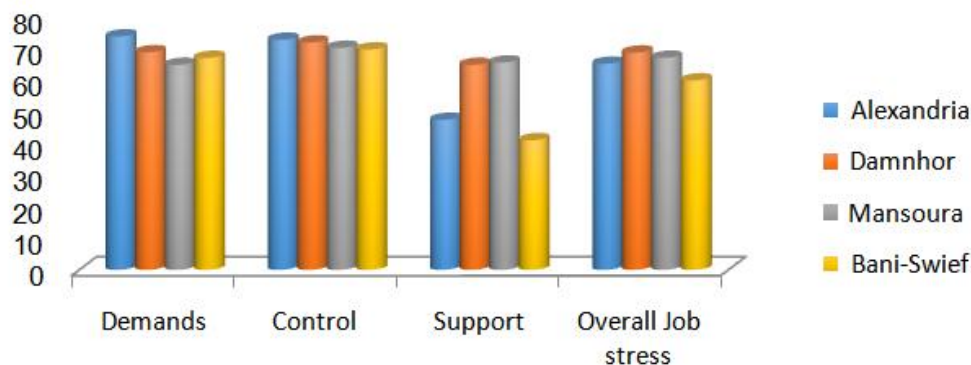


Figure (1): Comparison between the four studied groups according to their job stress sub-categories

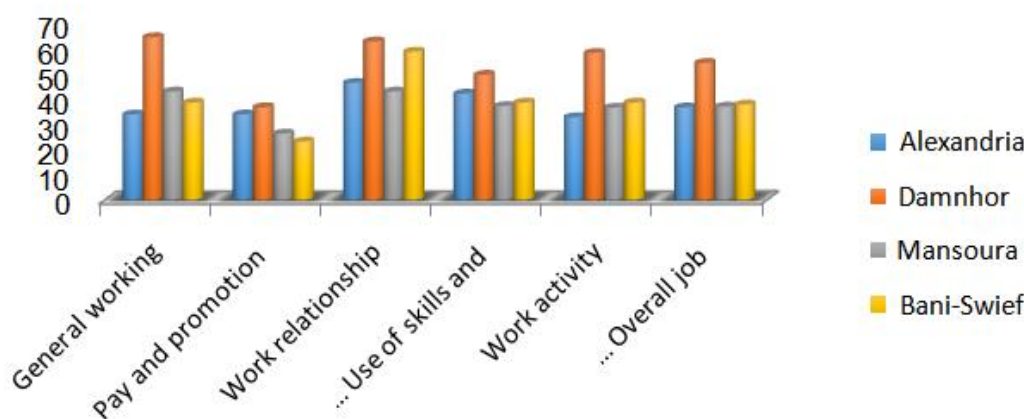


Figure (2): Comparison between the four studied groups according to their job satisfaction sub-categories

IV. Discussion

In critical care nursing education, theory and practice are linked together, because students must apply in clinical practice what they have learned in the classroom. Thus, the critical care nurse educators rather than critical care nurses have two-faced challenges; the critical care practical environment and the academic environment ⁽²⁾. This makes critical care nurse educators more susceptible to stress, burnout, low satisfaction with their jobs. The present study indicates that the majority of studied educators have a moderate level of stress. This could be due to the studied critical care nurse educators were exposed to multiple job stressors namely; increase the workload, lack of motivation, decrease the training opportunities, lack of resources and the very stressful working environment which may increase their stress levels, in addition to their feeling of loss of control over their jobs and increase in their work demands.

This finding is supported by Gunbayi (2014) ⁽³⁾ who studied the work stressors of academic staff in different settings and found that the academic staff perceive the increase the workload with staff shortage, lack of effective management and no job guarantee, and having no authority on responsibilities as work stressors that could increase the job stress level. Kaewanuchit et al (2015) ⁽⁶⁾ studied the causal relationship of occupational stress among university academics and found that the causal exogenous relationship of stress among the academics was the job and environmental conditions.

This finding is dissimilar to Winefield and Jarrett (2001) ⁽¹⁾ in a survey conducted to study the occupational stress in university staff which concluded that all educators had a high level of stress, although their anxiety and job satisfaction levels were normal. Joseph et al (2013) ⁽⁵⁾ conducted a study in three different

institutions to capture the stress indicators and the challenges associated with stress. They found that lack of annual leave and high cost of living were the main causes of stress while lacking of resources and workload indicators were insignificant among academic staff and did not contribute to stress.

Critical care nurse educators educate and train the students to provide an empathetic, culturally sensitive, moral, and high quality care, in working environments with scarce resources and increasing responsibilities with almost role conflict. Such imbalance between providing high quality and safe care and coping with stressful, and challenged working environment can lead to **burnout**⁽⁴⁾.

The current study presents that no statistical significant difference was found between the four academic institutions in relation to burnout levels as most of the educators have been had a moderate level of burnout. This may be due to prolonged exposure to work related stressors resulting from the imbalance between the proposed and actual working environment. In addition to higher work demands, role conflicts as well as lack of motivation, self-development, control, and support are continual stressors repeated daily.

Although burnout was not studied extensively in relation to critical care nurse educators, there are few researches which studied the nurse educators' burnout and other researches that studied the critical care nurse providers' burnout as general. Sarmiento et al (2004)⁽¹⁰⁾ found in a study conducted to test the relationships between empowerment, burnout and work satisfaction that nurse educators reported moderate level of burnout as a result of their jobs. Also, Jacobson found in a qualitative study of doctoral dissertation (2016)⁽²⁴⁾ to explore teacher burnout that teachers' burnout could affect the student learning negatively as burnout could lead to decreasing levels of commitment to students when they experience burnout. Also, in agreement to this finding, Guirardello (2017)⁽²⁵⁾ assessed the nurse team perception about the intensive care environment and its association with the patients' safety, quality of care and burnout level. Guirardello concluded that the nursing team perceived a moderate level of burnout in the form of personal accomplishment.

Contradicting to the current study, Cishahayo et al (2017)⁽¹⁹⁾ who measured the burnout level among intensive care and emergency units found that the participants had high level of burnout which is reflected in high scores on emotional exhaustion and high depersonalization and low personal accomplishment. Myhren et al (2013)⁽¹⁴⁾ also assessed the critical care workers' burnout level and found that the mean scores of burnout were low although their job satisfaction level was low.

Burnout and job satisfaction have been associated with each other as well as increase stress level as a vicious cycle. In which burnout directly could affect the work outcomes through decreasing the resources for coping leading to persisting low job satisfaction and more stressors. In a study of Myhren et al (2013)⁽¹⁴⁾ who assessed the association between the burnout, job stress and **job satisfaction**. They found through a multivariate regression analyses that job stress and job satisfaction were independent predictors of the burnout level for workers in ICUs. In this respect, the current study reveals that most of critical care nurse educators had a low job satisfaction level in the four academic institutions. This could be explained by the fact that most of educators have rated a poor general work condition, unhealthy work relationships, lack of opportunities to utilize and learn new skills with little support for continuous education, and the varieties of job responsibilities with role conflicts. In addition to lack of resources, unsatisfied payment/ promotions which definitely lead to low levels of job satisfaction.

In line with this finding, Sarmiento et al (2004)⁽¹⁰⁾ tested a theoretical model to specify the relationship between empowerment, burnout and job satisfaction. They found that the educators had have a moderate level of satisfaction in their job. In another study conducted by Tang and Ghani (2012)⁽¹²⁾, revealed that nurse educators' job satisfaction level was significantly related to their payment. Also, Nantsupawat et al⁽²⁶⁾ in 2017 concluded in a study that the work environment could impact the nurses' job dissatisfaction. Lane et al (2010)⁽²⁷⁾ in a qualitative study found that the work motivation factors were the highest predictor of job satisfaction among nurse faculty in Florida. This study supported the attainment for continuous education, good work condition, and satisfied salaries could promote the job satisfaction and intent to stay. Chin et al⁽²⁸⁾ by 2012 conducted a study to assess the job satisfaction of nurse lecturers in Malaysia and found that most of the nurse lecturers had a moderate level of satisfaction.

V. Conclusion and recommendations

Based on the finding of the current study, it can be concluded that the critical care nurse educators in the different four academic institutions faced multiple challenges which could contribute to job stress, burnout and dissatisfaction. Most of the studied critical care nurse educators have been experienced a moderate level of job stress and burnout associated with a low level of job satisfaction.

The following can be recommended to:

- Assess the factors responsible for stress, burnout and dissatisfaction for critical care nurse educators in their work environment.

- Break the vicious cycle of stress, and burnout which lead directly to low job satisfaction level and creating an unfriendly environment.
- Increase critical care nurse educators' empowerment structures of information, continuing training, resources and opportunities for a great accomplishment in their academic career.
- Conduct further studies to explore specific strategies for managing stress, burnout, and improve job satisfaction.

Limitations of the study:

The study was conducted in only four academic institutions on convenience sample of 70 critical care nurse educators and this not enough sample to generalize the results. These institutions only were having the willing to participate in the current study. In addition, when self-report scales are used, response bias would be a concern. Finally, there is a need to study extensively the experience of the critical care nurse educators' work stress and challenges using a qualitative research design.

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Fatma Refaat Ahmed. "Stress, burnout, and job satisfaction of critical care nurse educators." *IOSR Journal of Nursing and Health Science (IOSR-JNHS)*, vol. 7, no.6, 2018, pp. 30-37.