

Original Paper

Stress and Burnout among Preretirement Employee in Hospital at 10th of Ramadan City

Eman S. Abd Allah^{1*}, Samia S. Hassan Hussein², Hanaa K. Farag³ & Mervat E. Ibrahim³

¹ Community Health Nursing, Zagazig University, Egypt

² Family and Community Health, Suez Canal University, Egypt

³ Family and Community Health Nursing, Suez Canal University, Egypt

* Eman S. Abd Allah, Community Health Nursing, Zagazig University, Egypt

Received: February 9, 2019 Accepted: February 18, 2019 Online Published: February 22, 2019

doi:10.22158/csm.v2n1p41

URL: <http://dx.doi.org/10.22158/csm.v2n1p41>

Abstract

Employees are at high risk for stress and burnout. The aim of this study was to assess job stressors and burnout among employees in hospital at Tenth of Ramadan city. Design: cross-sectional descriptive design. Setting: the National Health Insurance Hospital at 10th of Ramadan city. Samples: convenience sample consisted of 100 employees. Tools: a self-administered questionnaire including scales for job stress and strain, burnout, and coping strategies, in addition to socio-demographic data was used in data collection. Results: the majority of the nurses were younger than 30 years (78%), with diploma degree (93%), and insufficient income (69%). More nurses had high exposure to stressors (49%), than strains (19%), and 20% had high burnout. Conclusion: the coping strategy most commonly used was effective behavioral confrontation. Nurses' stress, strain, and burnout are strongly correlated and are influenced by personal factors such as age, qualification, experience, and residence, as well as job factors such as work hours, income, and the use of ineffective coping. Recommendations: the hospital administration should deal with and periodic assess the job factors underlying nurses' stress and burnout. Further research is proposed to investigate the effectiveness of changing work environment factors and nursing care system on nurses' burnout.

Keywords

stress, stressors, burnout

1. Introduction

Employees in all countries are at high risk for burnout, low job satisfaction, and intention to leave (Nantsupawat et al., 2011), all of which are regarded as important employees' outcomes (Aiken et al., 2014). These outcomes have received increasing attention because of the widespread shortage of nurses (Hudspeth, 2013), and the hospital work environment has been regarded as an important factor related to employees' outcomes (Zhang et al., 2014).

Stress is a natural part of life, and occurs whenever there are significant changes in individuals' lives, whether positive or negative. It is generally believed that some stress is acceptable, sometimes referred to as challenge or positive stress but when stress occurs in amounts that individuals cannot cope with both mental and physical changes may occur (Canadian Centre for Occupational Health and Safety, 2011). Evaluation of the workload of employees is of fundamental importance in the development of work optimization protocols for nursing professionals. To identify this variable, it is necessary to measure the time that nurses spend to provide both direct and indirect care to patients (Garcia et al., 2010).

The assessment of employee's workload is also used in an attempt to predict the time and skill required to provide care (Swan & Griffin, 2015). However, measuring the time spent on nursing care in an outpatient clinic is a major challenge because of the unpredictability of the population served (Cusack et al., 2014). Stress and burnout are very serious problems in any organization. Both affect productivity of the organization through increasing rate of absenteeism and turnover. About 2.3% of the work force is absent each day and 12% of absenteeism is attributed to stress (Aamodt, 2012). In this regard, the Health and Safety Executive (2013) estimated that about 12.8 million working days were lost due to stress, depression and anxiety. Each new case of stress leads to an average of 31 days off work. Work-related stress costs society about 3.7 billion every year.

1.1 Significance of the Study

The Health Insurance Hospital at the 10th of Ramadan city, as in many other settings, suffers the problem of shortage of employee's leading to high workload, stress, and burnout. Hence, it is important for the organization to identify workplace stressors and the level of burnout and the relation between them in order to provide strategies for effective management, which would help in improving performance, care quality, and job satisfaction, and decreasing absenteeism and turnover

1.2 Aim of the Study

The aim of this study was to assess job stressors and burnout among employees in the Health Insurance Hospital at the 10th of Ramadan city.

To fulfill this aim the following research objectives were formulated:

1) To identify job stressors and levels of burnout among employee's in the Health Insurance Hospital at the 10th of Ramadan city.

- 2) To examine the relationship between job stressors and level of burnout among employee's in the Health Insurance Hospital at the 10th of Ramadan city.
- 3) To suggest strategies for stress and burnout management for employee's and assistants in the Health Insurance Hospital at The 10th of Ramadan city.

2. Method

2.1 Technical Design

The technical design involves a description of the research design, study setting, subjects, and tools for data collection.

2.1.1 Research design

An analytic cross-sectional design was used where all the dependent and independent variables were measured at the same point in time.

2.1.2 Setting

The study was carried out in the Health Insurance Hospital at 10th of Ramadan city. It is a six-floor building hospital offering all specialties. The first floor hosts the general manager and administrative offices, security department, as well as the laboratory, X-ray, emergency and emergency surgery departments. The second floor is for ICUs, dialysis unit, and head nurse office. The third floor is for surgical department, the fourth for orthopedic department, and the fifth for labor department.

2.1.3 Subjects

A convince sample of all the available employees who agreed to participate in the study at time of data collection was included. Their total number was 100 employee's working in different clinics, 40 in the first floor, and 60 in the second floor. This sample size was large enough to demonstrate any correlation coefficient of 0.25 or higher with 80% power and at a 95% level of confidence between the score of stress and burnout with a non-response rate of approximately 15%, using the sample size equation for correlation (Stanton & Glantz, 2016).

2.1.4 Tools for Data Collection

The researcher prepared a self-administered questionnaire which included three different scales for assessment of job stress and strain, burnout, and coping strategies. It consisted of the following parts.

Part I: Socio-demographic data: This was for collecting employee's personal data such as age, qualification, experience years, monthly income, marital status, number of children, etc. It also collected some job-related data such as work shifts, daily and weekly hours, types of patients, etc.

Part II: This consisted of the job stressors questionnaire developed by Abd El-Hady (2012), based on Vroom and Spielberger (2018). It involves 42 statements divided into two sections measuring stressors, and strain (the physiological response to stressors).

Stressors: This section involved four types of stressors:

Personal stressors: 9 items such as getting pregnant, parents' care, etc.

Job stressors: 17 items covering:

Clinic related stressors: 4 items such as low salary, etc.

Work-overload related stressors: 4 items such as heavy work load affecting family needs, etc.

Psychological stressors: 8 items such as lack of cooperation among nurses, risks of dealing with patients, feeling insecure in job, etc.

Strains: these included:

Physical strains: 10 items such as fatigue, headache, etc.

Gastro-intestinal strains: 6 items such as loss of weight, increased appetite, etc.

The items are on a 4-point Likert scale: usually, sometimes, rarely, and never. These were scored from 3 to 0 respectively. For each area of stress/strain for the total scales, the scores of the items were summed-up and the total divided by the number of the items, giving a mean score for the part. These scores were converted into percent scores. The employee was considered to have a high stress/strain if the percent score was 60% or more and low if less than 60%.

Part III: This consisted of the Maslach Burnout Inventory Educator Survey (MBI-ES) developed by Maslach et al. (2015). It is used to measure burnout syndrome among employees. The scale has 15 items divided as follows:

Emotional exhaustion: 5 items such as "I feel exhausted at the start of my workday".

Depersonalization: 3 items such as "I feel blame towards patients' problems", etc.

Personal achievement: 7 items such as "I feel very active", etc.

The items are on a 7-point Likert scale: daily, sometimes weekly, once weekly, sometimes monthly, once monthly, sometimes yearly, and never. These were scored from 6 to 0 respectively. The scoring was reversed for positive items so that a higher score reflects more burnout. For each burnout dimension and for the total scale, the scores of the items were summed-up and the total divided by the number of the items, giving a mean score for the part. These scores were converted into percent scores. The nurse was considered to have a high burnout if the percent score was 60% or more and low if less than 60%.

Part IV: This part consisted of a questionnaire to assess different coping strategies for stress and burnout management. It was developed by Lazarus and Folkman (2014) and modified by the researcher. The scale has 38 statements categorized into the following coping strategies:

Effective emotional confrontation: 7 statements such as seeking help from God, accepting problem, sharing stressful feelings with family members, etc.

Effective behavioral confrontation: 11 statements such as doing double effort to make positive things, seeking advice from superiors to solve problem, etc.

Ineffective emotional perception: 4 statements such as keeping feeling to oneself, escaping from facing

a stressful event, day dreaming, etc.

Ineffective emotional coping: 7 statements such as postponing thinking about the problem, getting oversleeping, etc.

Problem solving coping: 7 statements such as setting a plan to solve the problem, taking responsibility, etc.

The items have Yes/No responses. These were scored 1 and 0 respectively. For each coping strategy, the scores of the items were summed-up and the total divided by the number of the items, giving a mean score for the part. These scores were converted into percent scores. The employee was considered to have the specific coping strategy if the percent score was 60% or more and low if less than 60%. The nurse was also considered as having effective coping if she had any one of the effective strategies.

2.2 Operational Design

This design involves a description of the preparatory phase, the pilot study, and the fieldwork.

2.2.1 Preparatory Phase

During this phase, the researcher reviewed local and international literature using various resources including internet and manual search in scientific journals and textbooks. Based on this, the preliminary form of the data tool was prepared.

2.2.2 Validity of the Tools

This was presented to three experts in the field of Community Health Nursing at Suez Canal University Faculty of Nursing. They face and content-validated the tool after assessing it for clarity, relevance, and comprehensiveness.

2.2.3 Pilot Study

A pilot study was carried out 10% of the subjects in the study sample. The purpose was to test the applicability and clarity of the tool. No modifications were done according to the results of the pilot study.

Reliability of the scales used in the data collection tool. This was done through assessing their internal consistency and calculating their Cronbach alpha coefficients. The reliability proved to be high as indicated by Cronbach's Alpha (Stress scale=0.944, Strain scale=0.897, Burnout scale=0.887, and Coping scale=0.674).

2.2.4 Fieldwork

After obtaining all required official permissions, the researcher visited the study setting and met with the director to explain the aim and procedures of the study, and to seek cooperation in data collection. Then, she met individually with the eligible nurses and invited them to participate after explaining the aim of the study. Those who gave their consent were handed the data collection tool, with instructions on how to fill it. The completed form was collected by the researcher to verify its completeness. The fieldwork lasted for the fieldwork lasted for six months during the period from July to December 2017...

The researcher was present in the study setting daily, from 10: 00 am to 1: 00 pm. The tool filling took 25-30 minutes from each employee.

2.2.5 Ethical Considerations

The study protocol was approved by the Research and Ethics committee at the Faculty of Nursing, Suez Canal University. An oral informed consent was obtained from each participant before collecting any data. The researcher explained the study aim in a simple and clear manner to each employee. Participants were informed about their right to withdraw from the study at any time without giving any reason. Data were considered confidential and not be used outside this study without participant's approval. No harmful maneuvers were.

2.3 Administrative Design

An official permission was secured from the director of the Health Insurance Hospital at the 10th of Ramadan city, using proper channels of communication to conduct the study. Performed or used, and no foreseen hazards were anticipated from conducting the study.

2.4 Statistical Design

Data entry and statistical analysis were done using SPSS 20.0 statistical software package. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations and medians for quantitative variables. Cronbach alpha coefficient was calculated to assess the reliability of the developed tools through their internal consistency. Qualitative categorical variables were compared using chi-square test. Whenever the expected values in one or more of the cells in a 2x2 tables was less than 5, Fisher exact test was used instead. In larger than 2x2 cross-tables, no test could be applied whenever the expected value in 10% or more of the cells was less than 5. Spearman rank correlation was used for assessment of the inter-relationships among quantitative variables and ranked ones. In order to identify the independent predictors of stress, strain, and burnout scores, multiple linear regression analysis was used after testing for normality, and homoscedasticity and analysis of variance for the full regression models were done. Statistical significance was considered at p-value <0.05.

3. Result

Table 1 demonstrates that more than three-fourth of the employees in the study sample was younger than 50 years old. The majority was married (70%) and had children. As regards qualification, only 7% had a bachelor degree, and slightly less than half of them (47%) had experience years ranging between 20 and 30 years. The monthly income was mostly 750 to 950 LE (43%). As for the residence, three-fifth was from urban areas.

According to Table 2, only one-third of the employees s in the study sample worked shifts (33%), and slightly more than one-third of them worked <8 hours daily. The majority had all specialties in

outpatient clinics (75%), worked 40 hours or more per week (83%), and in the morning (88%). The highest category of patients they were dealing with were chronic cases (45%) while the lowest was psychiatric cases (14%). The work system was mostly employees' job (71%).

Table 3 shows that slightly less than one-fourth of the employees in the study sample were exposed to high personal stressors (23%). Meanwhile, more than half of them were exposed to job stressors, with the highest exposure being to work overload (76%). As for strains, 11% were exposed to physical strains and 29% to psychological strains.

Table 4 demonstrates statistically significant associations between employee's exposure to stress and their total strains ($p < 0.001$), total burnout ($p < 0.001$), and use of effective emotional confrontation coping ($p = 0.002$). It is noticed that more nurses having high strain, high burnout, and low use of the effective emotional confrontation coping strategy were having high exposure to stress.

As regards the relations between employees' strain and their burnout and their use of various coping strategies, Table 5 reveals a statistically significant association only between strain and burnout ($p < 0.001$). As the table demonstrates, higher percentages of nurses having high burnout were having high strain. As regards the correlations between employees scores of stresses, strain, burnout, and coping and their personal and work characteristics,

Table 6 shows that employees' age had statistically significant weak positive correlations with the scores of strains, effective emotional confrontation, and confronted problem-solving. Employees' qualification had a statistically significant weak positive correlation with the scores of effective emotional confrontations. Employees' experience had statistically significant weak positive correlations with the scores of stress, strain, and burnout. Their income had weak negative correlations with stress and strain, and moderate negative correlation with burnout, whereas it had weak positive correlations with effective emotional and behavioral confrontation

Table 1. Socio-Demographic Characteristics of Employees in the Study Sample (n=100)

Socio-demographic characteristics	Frequency	Percent
Age:		
<50	78	78.0
50+	22	22.0
Current marital status:		
Unmarried	30	30.0
Married	70	70.0
Number of children:		
0	5	6.4
1-2	36	46.2

3+	37	47.4
Nursing qualification:		
Diploma	93	93.0
Bachelor	7	7.0
Experience years:		
20-<30	47	47.0
20-30	18	18.0
>20	35	35.0
Monthly income (LE):		
<750	21	21.0
750-950	43	43.0
>950	36	36.0
Residence:		
Urban	60	60.0
Rural	40	40.0

Table 2. Job Characteristics of Employees in the Study Sample (n=100)

Job characteristics	Frequency	Percent
Work shifts:		
No	67	67.0
Yes	33	33.0
All specialties in outpatient:		
No	25	25.0
Yes	75	75.0
Work hours/day:		
<8	39	39.0
8+	61	61.0
Work hours/week:		
<36	17	17.0
36-40	83	83.0
Working time:		
Morning	88	88.0
2 shifts	4	4.0
Both	8	8.0
Dealing with:		

Chronic cases	45	45.0
Acute cases	23	23.0
Infectious cases	18	18.0
Psychiatric cases	14	14.0
Nursing care system:		
Nurse job	71	71.0
Team work	29	29.0

Table 3. Exposure to Stressors and Strains among Employees in the Study Sample (n=100)

Stressors and strains	Frequency	Percent
STRESSORS		
Personal:		
High (60%+)	23	23.0
Low (<60%)	77	77.0
Job stressors		
Clinic-related:		
High (60%+)	62	62.0
Low (<60%)	38	38.0
Work overload:		
High (60%+)	76	76.0
Low (<60%)	24	24.0
Psychological:		
High (60%+)	57	57.0
Low (<60%)	43	43.0
STRAINS:		
Physical:		
High (60%+)	11	11.0
Low (<60%)	89	89.0
Psychological:		
High (60%+)	29	29.0
Low (<60%)	71	71.0

Table 4. Relation between Employee's Exposure to Stress and Their Strain, Burnout and Coping

stress and their strain, burnout, and coping	Stress				X ² test	p-value
	High		Low			
	No.	%	No.	%		
Total strains:						
High (60%+)	17	89.5	2	10.5		
Low (<60%)	32	39.5	49	60.5	15.38	<0.001*
Total burnout:						
High (60%+)	20	100.0	0	0.0		
Low (<60%)	29	36.3	51	63.8	26.02	<0.001*
Effective emotional confrontation:						
High (60%+)	26	38.2	42	61.8		
Low (<60%)	23	71.9	9	28.1	9.85	0.002*
Effective behavioral confrontation:						
High (60%+)	37	49.3	38	50.7		
Low (<60%)	12	48.0	13	52.0	0.01	0.91
Ineffective emotional perception:						
High (60%+)	11	55.0	9	45.0		
Low (<60%)	38	47.5	42	52.5	0.36	0.55
Ineffective emotional coping:						
High (60%+)	7	77.8	2	22.2		
Low (<60%)	42	46.2	49	53.8	Fisher	0.09
Confrontive problem solving:						
High (60%+)	16	64.0	9	36.0		
Low (<60%)	33	44.0	42	56.0	3.00	0.08
Total effective coping:						
No	6	85.7	1	14.3		
Yes	43	46.2	50	53.8	Fisher	0.06

(*) Statistically significant at $p < 0.05$.

Table 5. Correlation Matrix of Employee's Exposure to Stress and Their Strain, Burnout and Coping

Scores of	Spearman's rank correlation coefficient							
	1	2	3	4	5	6	7	8
1- Stress								
2- Strain	.640**							
3- Burnout	.722**	.630**						
Coping:								
4- Effective emotional confrontation	-.138	-.064	-.159					
5- Effective behavioral confrontation	.090	.282**	-.029	.394**				
6- Ineffective emotional perception	.000	-.082	.094	.094	-.145			
7- Ineffective emotional coping	.187	.076	.310**	-.095	-.153	.394**		
8- Confrontive problem solving	.162	.057	.199*	.130	.024	.035	.207*	

(*) Statistically significant at $p < 0.05$.

(**) Statistically significant at $p < 0.01$.

Table 6. Correlation between Employee's Exposure to Stress and Their Strain, Burnout and Coping and Their Personal Characteristics

personal characteristics	Spearman's rank correlation coefficient							
	Stress	Strain	Burnout	Effective emotional confrontation	Effective behavioral confrontation	Ineffective emotional perception	Ineffective emotional coping	Confrontive problem solving
Age	.116	.223*	.101	.250*	.107	-.022	.104	.200*
Qualification	.110	.194	.023	.242*	.180	-.158	.092	.178
Experience	.305**	.284**	.346**	-.101	-.101	.081	.161	.190
Income	-.286**	-.209*	-.442**	.230*	.259**	.097	.031	-.026
Hours/day	.149	.317**	.207*	-.223*	.068	-.059	.167	-.142
Hours/week	.340**	.410**	.208*	-.057	.215*	-.050	.087	.012

(*) Statistically significant at $p < 0.05$.

(**) Statistically significant at $p < 0.01$.

4. Discussion

The aim of this study was to assess job stressors and burnout among employees in the outpatient clinics at Tenth of Ramadan city. According to the present study findings, almost a half of the employees had high exposure to stressors. The sources of these stressors were mainly related to job rather than to personal factors. As the results indicated, only less than one-fourth of these employees experienced high exposure to personal stressors. The finding indicates that the family-related variables and commitments did not have a major contribution to nurses' stress. This may be explained by that employees have arranged their personal and family life so that no or minimal conflicts would happen that may put them under stress. In agreement with this, a study in Italy revealed that nurses' personal factors such as age, experience, time to commute to work, and number of children were not correlated to higher stress scores (Romano et al., 2015). Meanwhile, family-related stress was high among nurses in Taiwan (Fang et al., 2014).

Meanwhile, the stressors facing the nurses in the present study were more frequently related to work, the highest being attributed to work overload. The reason for this overload could be the shortage of nurses and the high numbers of patients, which would lead to very high patient-to-nurse ratios. This is in fact a major cause of job stress in any work setting, particularly in the nursing profession. In this job, a work overload may increase the chances of errors, which might have serious consequences on patients' health and wellbeing. Therefore, this would constitute a major source of stress among nurses.

In agreement with these present study findings, Romano et al. (2015), in a study assessing occupational stress among nurses in Italy, reported workload as the source of job stress with the highest score among them. The findings are also in line with previous studies, which identified high workload as a source of stress among nurses (Kyriako, 2012; Lee & Wang, 2013). Moreover, Brown (2011) emphasized that performing too many tasks in too little time is the most frequent complaint among employees. Actually, the nurse must teach, counsel students, and work on committees, as well as engage in clinical practice with students. This could also be due to managerial lack of efficiency in work distribution and assignments, which could be an important stressor for employees as demonstrated by Mohamed (2012) in a study carried out at El-famous outpatient clinics.

The current study has also assessed employee's response to stress, i.e., their strains. The findings identified lower levels of strain among these employees especially the physical strains. This could be attributed to the nature of work in the outpatient clinics, which does not necessitate due physical efforts from the employees when compared with their peers in wards where patients' assistance may be strenuous. Thus, the physical strains could be just in the form of fatigue, headache, and backache due to prolonged standing. Similar physical symptoms were reported by Wong et al. (2011) who reported that stress-related physical illnesses included migraine, headache, muscle, back, and joint pains.

5. Conclusion

The employees in the study settings are exposed to high stressors in their work environment. However, a smaller percentage of them do have strain and burnout mainly related to depersonalization. Their use of various coping strategies is variable, with high use of effective behavioral confrontation. Nurses' scores of stress, strain, and burnout are strongly correlated. Employees stress is increased with longer experience, more work hours, and lower income. Employees strain is increased by age, higher qualification, more work hours, and higher stress score, while the confrontive problem-solving coping lessens it. As for burnout, it is increased by work hours, urban residence, lower income, and higher stress and strain, the use of ineffective emotional coping, and the failure to use effective emotional confrontation coping. Therefore, employee's burnout, stress, and strain are inter-correlated. They are influenced by nurses as well as work setting factors. The use of effective coping strategies can help relieve.

6. Recommendation

In the light of the study findings, the following recommendations are proposed.

- Employees need training in the use and application of effective coping strategies to help them overcome the negative consequences of job stress and burnout. This could be done through on-the-job training as well as seminars and workshops.
- Employees at higher risk for stress and burnout such as those of older age, long experience, rural residence, and low income should be more targeted with such training.
- The hospital administration should deal with the job factors underlying employees stress and burnout such as the long working hours, workload, and the nursing care system.
- Periodic assessment of employees' levels of stress, strain, and burnout needs to be done regularly to help in early detection of those affected before they suffer strains.

References

- Aamodt, M. G. (2012). *Industrial/Organizational psychology: An Applied Approach* (5th ed.) (p. 513). USA: Thomson Wads worth.
- Abd El-Hady, M. (2012). *Job Stressors and Coping Strategies among Nurse Educators at Secondary Technical schools of Nursing in Alexandria* (Unpublished Master Thesis). Faculty of Nursing Alexandria University, Egypt.
- Aiken, L. H., Clarke, S. P., Sloane, D. M., Lake, E. T., & Cheney, T. (2014). Effects of hospital care environment on patient mortality and nurse outcomes. *The Journal of Nursing Administration*, 38, 223-229. <https://doi.org/10.1097/01.NNA.0000312773.42352.d7>

- Brown, M. K. (2011). Role strain: Nurse, researcher, educator, counselor. *The Canadian Nurse*. Retrieved April 5, 2014, from <http://www.acofps.com/vb/showthread.php.html>
- Canadian Centre for Occupational Health and Safety. (2011). *Workplace stress-general*. Retrieved June 5, 2015, from <http://www.ccohs.ca/oshanswers/psychosocial/stress.html>
- Cusack, G., Jones-Wells, A., & Chisholm, L. (2014). Patient intensity in an ambulatory oncology research center: A step forward for the field of ambulatory care. *Nurs Econ.*, 22(2), 58-63.
- Fang, L., Fang, S. H., Chung, Y. H., & Fang, C. L. (2014). The Predictors of the Job Stress among Female Married Hospital Nurses. *Ind Health*.
- Garcia et al., (2010). Mental Health Foundation. In A. Moustaka, & C. Theodors, (Eds.), Sources and affects Work-related stress in nursing. *Thrace University, Health Science Journal*, 4(4), 212-214.
- Health and Safety Executive. (2013). *Management standards on work-related stress*. Retrieved May 16, 2015, from <HTTP://www.Gov.uk/stresson21>
- Hudspeth, R. (2013). Staffing healthy workplaces: Some global nursing shortage issues. *Nursing Administration Quarterly*, 4, 374-376. <https://doi.org/10.1097/NAQ.0b013e3182a2fa65>
- Kyriako, C. (2012). Teacher stress: Directions for future research. *Educational Review*, 53(1), 27-35. <https://doi.org/10.1080/00131910120033628>
- Lazarus, & Folkman. (2014). Stress, appraisal, and coping. New York, and related factors in community nurses. *Journal of Nursing Research*, 10(4), 235-260.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2015). Job burnout. In S. T. Fiske, D. L. Schechter, C. Zahn-Waxer (Eds.). *Annual Review of Psychology*, 53, 397-422.
- Mohamed, H. A. (2012). *Identify job stressors among teachers at Elfayoum* (Published Master Thesis). Saudi Arabia. Retrieved October 5, 2015, from <http://www.acofps.com/vb/showthread>
- Moustaka, A., & Theors, C. (2010). Sources and effects work-related stress in nursing, Thrace University. *Health Science Journal*, 4(4), 212-214.
- Nantsupawat, A., Srisuphan, W., Kunaviktikul, W., Wichaikhum, O. A., Aunguroch, Y., & Aiken, L. H. (2011). Impact of nurse work environment and staffing on hospital nurse and quality of care in Thailand. *Journal of Nursing Scholarship*, 43, 426-433. <https://doi.org/10.1111/j.1547-5069.2011.01419.x>
- Romano, M., Festini, F., & Bronner, L. (2015). Cross-sectional study on the determinants of work stress for nurses and intention of leaving the profession. *Prof Infirm*, 68(4), 203-210.
- Stanton, & Glantz. (2016). *Primer of Biostatistics: The program*. McGraw-Hill, version 3.01.
- Swan, B. A., & Griffin, K. F. (2015). Measuring nursing workload in ambulatory care. *Nurs Econ.*, 23(5), 253-260.
- Torres, R., Lambert, M., & Lawver, R. (2009). *Job stress among secondary Ag Teachers: An Explanatory study in American Association for Agricultural Education Research conference*

proceedings, Louisville, KY (p. 587).

Vroom, P. R., & Spielberger, C. D. (2018). Occupational stress: Measuring job pressure and organizational support in the workplace. *Journal of Occupational Health Psychology, 3*(4), 294-305.

Wong, D., Leung, S., So, C., & Lam, D. (2011). Mental health of Chinese nurses in Hong Kong: The roles of nursing stress and coping strategies. *Online Journal of Issues in Nursing, 5*(2).

Zhang, L. F., You, L. M., Liu, K., Zheng, J., Fang, J. B., Lu, M. M., & Bu, X. Q. (2014). The association of Chinese hospital work environment with nurse burnout, job satisfaction, and intention to leave. *Nurs Outlook, 62*(2), 128-137. <https://doi.org/10.1016/j.outlook.2013.10.010>