

Stressors among Nursing Staff Working in Intensive Care Unit in Governmental & Non-governmental Hospitals at Makkah Al-Moukarramah, KSA.

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Abstract: Working in any area of a hospital can be a very stressful experience. However, when working in areas such as the emergency room or the intensive care unit. Patients require a greater level of care and can take a turn for the worse in a heartbeat. These situations can require immediate response by the nursing staff and can often cause high stress level. **Aim:** to determine the work stressors among intensive care unit nurses in governmental & nongovernmental hospitals. **Research design:** is a descriptive correlational design. **Sample:** Seventy nurses working in intensive care units were included in the study (50) nurses were randomly selected from Al-Noor Specialist Hospital & 20 nurses were selected from Dr. Bakhash Hospital. **Tool:** The nurses' work stressors were measured by using the Health Professions Stress Inventory (HPSI). **Results:** The present study revealed that, working in ICU at governmental hospital major stressor than nongovernmental. Also, lack of professional recognition and work condition are the most common categories of stressor among nurses. **Recommendations:** Nursing managers need to listen to the concerns of nurses, and provide flexible scheduling, adequate staffing levels as well as appropriate rewards and recognition.

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1. Introduction

Due to many risks, threats and any other causes nearly all people experience some sort of stress. Work-stress is increasingly recognized as one of the most serious occupational health hazards **reducing workers satisfaction and productivity and increasing absenteeism and turnover (Rose et al., 2011).** The end result of continues work-stress over time is worker-burnout, which may lead to **serious physical and emotional problems (Scott et al., 2006).**

Also, **Sullivan & Decker(2010)** mentioned that, hospital-staff in particular are subject to work stress simply because they are severely challenged by their rapidly changing environment. Previous studies have revealed positive association between work-stress and the number of errors (**Meredith et al., 2007**).

In Georgia 24% (54/230) of the ICU nurses tested positive for symptoms of post-traumatic stress disorder related to their work environment, compared with 14% (17/121) of the general nurses ($p = 0.03$) (**Perry et al., 2000**). The highest level (55%) of stress was reported in Greece, and then in Slovenia, Sweden (38%), and Latvia (37%). While, the lowest stress levels were reported in the United Kingdom (12%), (**Malgorzata et al., 2009**). In Riyadh (**Al-Omar, 2003**) found that work-stress was higher among

nurses (stress level=4.04) and lower among hospital administrators (stress level=3.69).

A strong negative relation between nurses occupational stress and job satisfaction has been found, based on which growing occupational stress results in, increased turnover rate, which causes more and more nurses to leave the nursing profession (**Al-Shammari et al., 1996**) (**Sullivan & Decker, 2010**). **Work stressors**

Work-stress may be found both within worker personality and within the work environment. The four broad work stressor categories identified were; work condition, job uncertainty, interpersonal conflict and lack of professional recognition and support (**Al-Mishan, (2001)**). Work condition may be described as the demands associated with being in a nursing role e.g. (work overload, role conflict & role ambiguity) as well as the condition associated with working as a nurse in public hospital setting e.g. limited resources (**Ramirez et al., 2000 & Rebecca, 2004**).

Job uncertainty takes into consideration unexpected stressful events that are often beyond a nurses control e.g. (patient load, doctor not being available to make decisions, medical crisis & malfunctioning medical equipment). Interpersonal conflict involve conflict that arise from working so closely with patient and their relatives, as well as

doctors, all in times of acute stress conditions (Al-Fadli, 1999). Lack of professional recognition and support refers to the undervaluing of nurses skills, experience and qualifications by other health professionals, especially doctors and the insufficient provision of support (Eleni & Theodoros, 2010) (Perry *et al.*, 2000).

In the same line (Al-Aameri, 2000) mentioned that the most sources of stress, is workload, inadequate staff cover, time pressure, relationship with other clinical staff, leadership and management style, poor locus of control, poor group cohesion, lack of adequate supervisory support, coping with emotional needs of patients and their families, poor patient diagnosis, death and dying, shift working, lack of reward. Also, lack of clear direction concerning the organization goals was found to be among the significant causes of work stress (Bhatia, 2010). Role ambiguity, role conflict, and clarity of organizational goals were also found to be significant relationship with work-stress (Cavalheiro *et al.*, 2008).

Intensive care units are the backgrounds for extremely stressful situations that result from the regular expectation of emergencies, high technological complexity, and concentration of severely injured patients subject to sudden changes in their general health status. Thus, this work environment is characterized as stressful and the basis of an emotionally risky scenario, both for professionals and for patients and their family members (Vivian & Luiz, 2009).

Therefore, the nursing professionals who work in such units are expected to have accurate scientific knowledge, to be aware of technical and technological changes and to be highly specialized. So the aim of the present study was determine work stress sources among intensive care unit nurses in governmental & nongovernmental hospitals.

Significance of the study

Work stress can have a significant impact on individual nurses and their ability to accomplish tasks, poor decision making, lack of concentration, apathy, decreased motivation and anxiety may impair job performance creating uncharacteristic errors.

Research Questions

- What are the work stressors among intensive care unit nurses in governmental & nongovernmental Hospital?
- Are governmental hospitals, where more stressful than nongovernmental hospitals?

2. Subjects and Methods

Research design

The research design was descriptive correlation design.

Setting: The study was conducted at ICU at the governmental hospital (Al-Noor Specialist) & nongovernmental hospital (Dr. Bakhsh).

Sample: Seventy nurses working in intensive care units were included in the study (50 nurses were randomly selected from Al-Noor Specialist hospital & 20 nurses worked in Dr. Bakhsh hospital). The total sample was recruited according to the following inclusion criteria: different shifts, work experience ranged from 1 to 10 years, male & female regardless their nationality.

Tool: The tool of data collection used in this study was included two parts:

1-Assessment sheet design by the researchers to collect the demographic data (such as; age, gender, qualification, total years of experiences, years of experience in ICU and type of hospital).

2-Health Professions Stress Inventory (HPSI) this scale designed by (Wolfgang, 1988a) to measure work stressors among nurses in governmental & nongovernmental hospital. These scale measure four dimensions of stressor experienced by health professionals: work condition (8 items), patient care uncertainty (9 items), lack of professional recognition (11 items) and interpersonal conflict (3 items). Thirty one items be totaled to establish a global measure of stress. A five point Likert scale was used.

Scoring System: respondents answer items on a five-point scale ranging from 0 to 4. The responses of never, rarely, occasionally, often, usually were scored respectively as 0, 1, 2, 3, and 4. The over all scores of each dimension are calculated by taking the average (total score divided by number of items) of the respondent's score for each dimension and multiplying this by 100 to convert it into percent score. The score of 31 or less is considered no stress; the score which ranges from 32 to 62 is considered mild stress, the score which ranges from 63 to 93 is considered moderate stress and the score which ranges from 94 to 124 is considered high stress.

Pilot study

After review of the tools by experts and its approval, a pilot study was carried out before starting the actual data collection. The purpose of the pilot study was to ascertain the clarity, and applicability of the study tools, and to identify the obstacles and problems that may be encountered during data collection. It also helped to estimate the time needed to fill in the questionnaire. Based on the results of the pilot study, modifications, clarifications, omissions, and rearrangement of some questions were done. The pilot study was done on representative sample of 10 nurses working in ICU, and those were excluded in the total study subjects.

Ethical considerations

Before any attempt to collect data, a formal letter was issued from the Faculty of Applied Medical Sciences /Nursing Department- Umm Al Qura University, to obtain an official approval from the administrators of the hospitals where the data were collected to conduct the study. The letter identified the researchers, the title and aim of the study. Code number for each nurse were be maintained and participation is voluntary.

Methods

The investigators was hold a meeting with the head nurse of intensive care unit from each hospital to introduced themselves and briefly explained the nature of the study to the approached ones who met the criteria for inclusion in the sample and each meeting took for 10-15 minutes with each nurse to be completed with a daily interview of about 6-8 nurses. Each participant was notified about the right to refuse to participate in the study, before taking her verbal consent. A code number was used for every nurse to maintain confidentiality. The data collection phase of the study was carried out in two weeks (May 2011).

After obtaining the acceptance of nurses to participate in the study, the investigators provided the nurses an overview and clarifications about the assessment sheet questions and gave it to the nurses for answering. After two days the investigators returned again and collected it by head nurse when they finished.

The statistical analysis

The statistical package for social sciences (SPSS version 11) was used to analyze data for present study.

3. Results

The results of this study are presented under the following: demographic descriptions of the nurses under study, total scores of nurses among governmental& nongovernmental hospital in relation to level of work stress.

In figures (1, 2, and 3) showed that, the majority (92.9%) of the study subjects were female nurse. As regards to qualifications, it was found that, two thirds of sample approximately (70%) had a diploma in nursing, while the rest of them (30%) had bachelor's degree. According to type of the hospital 71.4% of nurses work in governmental hospital, while 28.6% of nurses work in nongovernmental hospital.

Table (1) clarified that, one third of nurses approximately had total work experience in nursing profession (nine years and more), while 28.6% of them had experience of 3- less than 6 years. Only

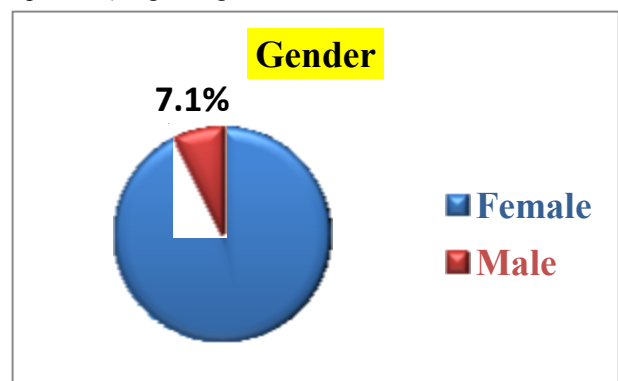
18.6% of nurses had less than 3 years' work experience. As regards to years of experience in ICU, less than two third (62.8%) of the study subject had two years and more, while 37.1% of them experienced less than 2 years.

Table (2) indicated that, the highest mean score of stressors were found among nurses in governmental hospital (72.7 ± 19.04) compared to (56.95 ± 14.64) in nongovernmental hospital as regards all items of work stressor categories with statistically significant difference ($t = 3.32$ at $p = 0.01$). Regarding to governmental hospital stressor, the highest mean (26.08) was observed in lack of professional recognition for nurses. While in nongovernmental hospital stressor, the highest mean (22.65) was observed in work condition.

Table (3) illustrated that the differences in work stressor among male and female nurse. Whereas the total mean score of female nurses was (72.20 ± 13.44) as regards all items of work stress category compared to male nurses (67.89 ± 19.59) that reflected no statistically significant difference.

Table (4) clarified that, there was statistically significant difference among diploma and bachelor nurses regarding to work stressor categories ($t = 0.28$ & 0.26 at $p = 0.05$ & 0.01). While the highest mean score was observed (24.6 ± 8.18 & 20.04 ± 9.08) in lack of professional recognition for diploma and bachelor nurses respectively. Also, the highest mean score was observed (20.04 ± 4.96) in work condition for bachelor nurses.

Table (5) showed that, the highest mean scores were observed in moderate stress level regarding to governmental hospital. While, the highest mean scores was observed in mild stress level regarding to nongovernmental hospital. Also, there was statistical significant difference ($t = 20.63$ & $p \leq 0.01$) regarding to moderate stress level in relation to governmental and nongovernmental hospital. While there was no statistical significant difference ($t = 0.14$ & $p < 0.05$) regarding to mild stress level.



Figure(1): Distribution of the sample by their demographic characteristics(No =70)

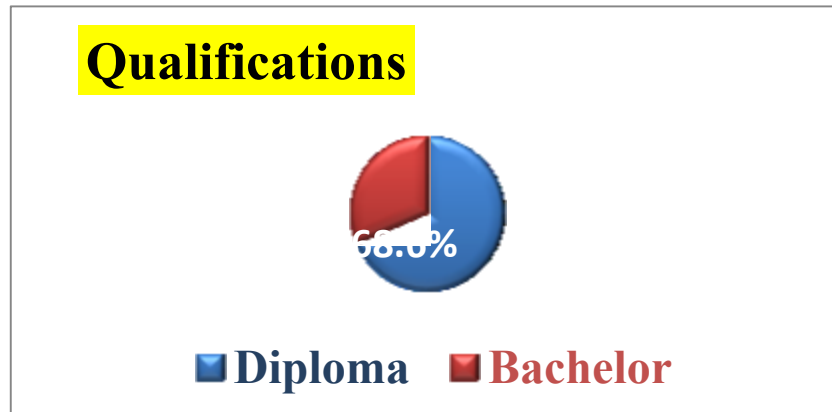


Figure (2): Distribution of the Participants by their qualifications (No =70)

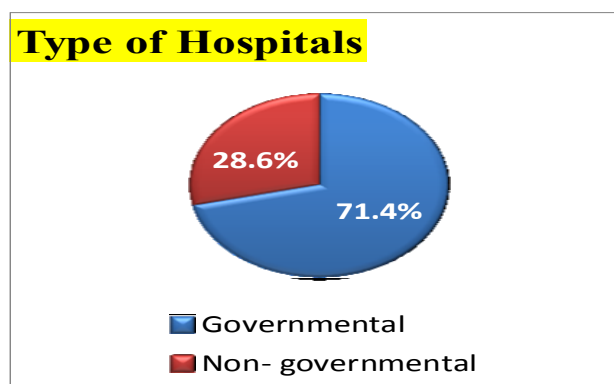


Figure (3): Distribution of the Participants as regard to types of hospitals (No =70)

Table (1): Distribution of the study subjects by their years of experience (No =70)

Variables	No (70)	%	f	P
Years of experience in the nursing profession				
• < 3	13	18.5	1.367	.260
• 3-< 6	20	28.6		
• 6-< 9	16	22.9		
• ≥ 9	21	30.0		
Years of experience in ICU				
• < 2	26	37.2	1.423	.248
• > 2	44	62.8		

Table (2): Work stressor categories among nurses in governmental and nongovernmental hospital.

Work stressor categories	Government No. (50)		Nongovernment No. (20)		t	p
	M	±S.D	M	±S.D		
Lack of professional recognition	26.08	7.19	16.30	8.20	4.79	**0.01
Patient care uncertainty	20.66	5.66	15.0	5.63	.870	*0.02
Work conditions	18.80	7.86	22.65	2.77	.120	*0.04
Interpersonal conflict	7.16	2.72	3.00	1.83	.021	**0.00
Total mean Score	72.70	19.04	56.95	14.64	3.32	**0.01

Sig. P ≤ 0.01

Table (3): Mean scores of nurses' gender in relation to work stressor categories.

Work stress category	Female No. (5)		Male No. (65)		t	p
	M	+S.D	M	+S.D		
Lack of professional recognition	24.6	4.28	20.97	7.61	1.5	0.20
Patient care uncertainty	19.20	5.45	19.03	6.27	0.06	0.95
Work conditions	29.60	6.84	28.12	8.64	0.37	0.71
Interpersonal conflict	4.00	1.58	3.97	2.10	0.03	0.97
Total mean score	72.20	13.44	67.89	19.59	0.48	0.63

Table (4): Mean scores of nurses' qualifications in relation to work stressor categories.

Work stress categories	Diploma No. (5)		Bachelor No. (65)		t	p
	M	+S.D	M	+S.D		
Lack of professional recognition	24.6	8.18	20.04	9.08	.28	*0.05
Patient care uncertainty	19.87	6.24	17.09	5.70	.55	0.07
Work conditions	19.83	7.76	20.04	4.96	.125	0.90
Interpersonal conflict	6.57	3.0	4.57	2.90	.26	*0.01
Total	70.54	20.16	61.76	15.18	.283	*.05

Table (5): Comparison between governmental & nongovernmental hospital regarding to level of work stress.

Stress Levels	Government No. (50)		Nongovernment No. (20)		χ^2	p
	N	%	N	%		
High stress	2	0.03	0	0	-	-
Moderate stress	33	0.47	5	0.07	20.63	0.01
Mild stress	13	0.19	15	0.22	0.14	0.82
No stress	2	0.03	0	0	-	-

4. Discussion

Empirical studies mentioned that, nurses who are stressed have higher absenteeism rates, lower satisfaction and are more likely to leave the organization (Hellriegel & Slocum, 2009).

The finding of the current study revealed that there was no statistically significant difference ($f=1.42$ & $p<0.05$) as regards to study subjects years of experiences in ICU. A study of Eleni & Theodoros (2010) revealed that the older employee has less work-stress level, but the higher educational level of nurses has more work-stress level. Females were more likely to report being stressed (Al-Mishan, 2001). The finding of the present study was in consistent with Al-Omar (2003) who found that, the older the employee the less work-stress was suffered and the more experience the employee had the less work stress.

This could be understandable because by time workers get more experience and become familiar with the hospital system and environment and hence become capable of coping with work-stress.

The findings of the present study pointed out most sources of work stress as regard patient care

uncertainty are dealing with difficult patients & caring for terminally ill patients, these findings were consistent with the findings of Vivian & Luis (2009) who found that, ICU & emergency units' nurses differed in terms of frequency and sources of job stress from medical and surgical nurses. Also, added that their finding indicated that death and dying situations were the most stressful to nurses. While, finding of present study were in consistent with Cavalheiro *et al.*, (2008) who stated that Australian nurses did not indicate that dealing with dying patients as a major sources of stress.

The finding of the current study showed that, a conflict with supervisor and administrator is the most work stress source related to job conflict. The impact of professional conflict as a source of distress is supported by findings of Bhatia & Nirmanmoh (2010), who found that, emotional exhaustion and job disengagement, the two main components of burnout arising as a consequence of severe distress.

Also, Rebecca (2004) found that inter- and intra-professional conflict continues to be an important source of stress for nurses. Inter

professional conflict, particularly between nurses and physicians, appears to be more of a problem.

The findings of this study indicated that no statistically significant difference was found among male and female nurse in relation to source of work stress. This finding was consistent with the findings of **Al-Mishan (2001)** who found that, nurses' levels and work stress are not significantly influenced by gender. These findings of the study could be as result of the sample size of male is typically small.

The findings of this study indicated that highly statistically significant difference were found ($t = 20.63$ & $p \leq 0.01$) as moderate stress level in relation to total scores of work stress levels for governmental hospital. This finding was according with finding of **Andrew (2003)** who found that, all governmental health professionals (nurses and hospital managers) agree significantly that they experienced work-stress.

5. Conclusion

The present study concluded that, nurses working in ICU at governmental and nongovernmental hospital were stressful. Although, the highest mean scores was observed in moderate stress level regarding to governmental hospital. While the highest mean scores was observed in mild stress level regarding to nongovernmental hospital. Lack of professional recognition and work condition are the most common categories of stressor among nurses. Also, there was statistical significant difference regarding to moderate stress level in relation to governmental and nongovernmental hospital.

Recommendations

The current study recommended that:

1. Educational program on "how to manage work stress" must be applied at health settings (hospitals).
2. Nursing managers need to listen to the concerns of nurses, and provide flexible scheduling, adequate staffing levels as well as appropriate rewards and recognition.
3. Replicate this study with larger and more heterogeneous randomly selected sample.

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