

Relationships between Staff Nurses' Satisfaction with Quality of Work and their Levels of Depression, Anxiety, and Stress in Critical Care Units

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Abstract: Background: staff nurses' satisfaction with the quality of their work depends on the type of units in which they work and their levels of depression, anxiety and stress. **Aim of the study:** To determine the relationships between staff nurses' satisfaction with the quality of work and their levels of depression, anxiety and stress in critical care units. **Subjects:** All staff nurses in all critical care units (n = 126) at Alexandria Main University Hospital. **Tools:** Two tools were used in this study namely: work quality satisfaction index (WQI) which contains six sub-dimensions and depression, anxiety, stress scale (DASS). **Results:** 62% of staff nurses' scored moderate satisfaction with the quality of work (WQI) in critical care units. In relation to, the overall level of staff nurses' satisfaction and depression, anxiety and stress; there was a significant negative weak correlation between overall satisfaction and depression scores. Regarding, staff nurses' satisfaction with the quality of their work sub-dimension and depression level, there was a highly significant negative correlation between professional relationships, and professional role enactment sub-dimension ($\rho = -0.263$ & $P = 0.003$ and $\rho = -0.236$ & $P = 0.008$) respectively. However, as for the satisfaction of staff nurses' with the quality of their work and anxiety level, there was a highly significant negative correlation in the professional relationships sub-dimension ($\rho = -0.240$ & $P = 0.007$) and a significant negative correlation in the professional role enactment sub-dimension ($\rho = -0.213$ & $P = 0.17$). Furthermore, concerning staff nurses' satisfaction with the quality of work sub-dimension and stress level, a significant negative correlation was found in the professional role enactment sub-dimension where ($\rho = -0.229$ & $P = 0.010$). **Conclusion:** There was a significant negative weak correlation between the mean total score percentage of staff nurses' satisfaction and the quality of work and their depression level in critical care units. In addition, there was a negative correlation between the mean total score percentage of staff nurses' satisfaction with the quality of work, and anxiety and stress level but not significant. **Recommendation:** 1) The director of the nursing service should encourage the presence of a counseling center in each health care organization to provide a psychological counseling and enhance self assertiveness of staff nurses. 2) The director of the nursing service should develop positive interpersonal relationships among health care team members through implementing communication skills training program.

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1- Introduction

As a general rule, the quality of work depends on a proper work environment in which nurses work. Actually, it is an essential issue in their patients outcome and turnover and it plays a significant role in their satisfaction.⁽¹⁻⁶⁾ Nurses satisfaction is an essential part of ensuring high quality care and the degree by which staff nurses' feel positively or negatively about their job.^(7, 8) In this respect, Jennings (1990) stated that a poor quality of work can reduce job satisfaction of staff nurses' and endanger their well being.⁽⁹⁾

According Whitley (1994) nurses satisfaction with the quality of their work is based on six main sub-dimensions.⁽¹⁰⁾ The first sub-dimension is **the professional work environment of the hospital structure** which points to factors and conditions in the surrounding environment that may have an impact on quality.⁽¹¹⁾ The second is **the Job properties of**

autonomy which refer to the extent of staff nurses' satisfaction with their work and ability to make decisions without undue influence from others.⁽¹²⁾ Another sub-dimension is **work worth to self and others** which illustrates to what extent staff nurses are considered characterized by a high level of engagement and commitment.⁽¹³⁾ The fourth sub-dimension is **professional relationships** which refers to the extent of staff nurses' satisfaction with their practice in their environment such as; participative management with open communication; good relationships with physicians and other health care members.⁽¹⁴⁾ Next comes **professional role enactment** which implies the extent to which staff nurses are satisfied about their practice in their setting, performance of new procedures and development of new skills during their professional careers. As a matter of fact, the role of nurses is influenced by how

well others understand expectations for this role and their acceptance of the individual nurse.⁽¹⁵⁾ Finally, the sixth sub-dimension is the **benefits offered by job to staff nurses** which points to **the** career development, opportunities of all full-time and part-time benefits received by staff nurse.⁽¹⁶⁾

Definitely, job stress is a serious threat to the staff nurses' satisfaction with the quality of work.⁽¹⁷⁾ Psychological stress refers to a particular relationship between the person and the environment which is appraised by the person as taxing and/or exceeding his or her resources and endangering his or her well-being.⁽¹⁸⁾ In other words, negative stress is an imbalance between the perceived external demands on the person and his or her abilities through the employment of cognitive, behavioral and physiological adaptation.⁽¹⁹⁾ Persistently, a high level of stress can lead to anxiety.⁽²⁰⁾

According to Carson (2000) anxiety is an intense feeling of fear or dread due to an uncertain cause.⁽²¹⁾ It is a vague feeling of uneasiness, uncertainty and helplessness.⁽²²⁾ Moreover, it is usually activated by stress and may lead to more stress.⁽²³⁾

Generally speaking, in nursing, high levels of stress produce feelings of depression, inadequacy, somatic complaints, sleep disturbance and burnout. In addition, guilt feeling, conflict and maladaptive forms of coping are also common.⁽²⁴⁾

Evidently, there is a strong link between stress and depression.⁽²⁵⁾ Depression is a complex internal state which encompasses many elements namely: physical symptoms (tiredness, sleepiness), negative feelings about oneself (feeling vulnerable), impulses to action, and physiological changes (loss of appetite). If people describe depression in such terms, it is evident that these feelings can happen to anyone.⁽²⁶⁾

In U.S.A a study was done by Mazurek *et al.*, (2013) which focused on the relationships among work stress, job satisfaction, mental health and healthy life style behaviors of newly graduate nurses attending the nurses athlete program. These relationships demonstrated that higher levels of work place stress were associated with higher levels of depression and anxiety as well as lower levels of resiliency, job satisfaction and healthy life style beliefs.⁽²⁷⁾ Meanwhile, the study conducted by Cavalheiro *et al.*, (2008) concentrated on "stress in nurses working in intensive care units". In facts, it concluded that there was a relation between the stress sources identified by the questionnaire of critical situations with the levels of stress and general dissatisfaction with work.⁽²⁸⁾ Furthermore, Mohammady *et al.*, (2011) investigated the relationship between psychological problems and quality of work life of intensive care units nurses. The study concluded that there was no relationship between stress and depression with the quality of work

life of nurses, but there was a relationship between qualities of work life and nurses' anxiety.⁽²⁹⁾

In addition, Trivellas *et al.*, (2013) stated the effect of job related stress on employee's satisfaction. In fact, he concluded that conflict, heavy work load and lack of job autonomy were negatively associated with all job satisfaction dimensions, on the other hand, shortage in information access and feedback were positively related to employee's satisfaction with rewards and job security.⁽³⁰⁾

In Egypt, A study was done by Awad (2011) to investigate the relationship between the quality of nursing work life and job satisfaction in acute care units. It concluded that most nurses in the acute care units perceive high quality of nursing work life which had an impact on their job satisfaction.⁽³¹⁾

Furthermore, the relationship between work place violence and nursing staff job satisfaction was tested by Ahmed (2011) he concluded that the nursing staff generally showed positive significant correlation between the factors affecting workplace violence and their job satisfaction except for the nurse relationship factor with all factors affecting job satisfaction and nurse/ patient relationship with staff development and administration support.⁽³²⁾

Meanwhile, Abou Elala (2012) investigated the relationship between self efficacy and job related stressors as perceived by the nursing staff in critical care units. The study concluded that the job related stressors affected nurses' self efficacy as improved self efficacy resulted in reduced stress.⁽³³⁾

Therefore, this study is conducted in the critical care units at Alexandria Main University Hospital to determine the relationships between staff nurses' satisfaction with the quality of work and their levels of depression, anxiety and stress.

It is hoped that this study will give more insight to nurse managers to focus their attention on the variables that influence staff nurses' satisfaction and the value of understanding the relationships between staff nurses' satisfaction with the quality of work and their levels of depression, anxiety, and stress in the critical care units in order to enhance staff nurses' satisfaction and organizational productivity as well as maintain a sense of well being.

Aim of The Study

The study aims at determining the relationships between staff nurses' satisfaction with the quality of work and their levels of depression, anxiety and stress in critical care units at Alexandria Main University Hospital.

Research Question:

Is there a relationship between staff nurses' satisfaction with the quality of work and their levels of depression, anxiety and stress in the critical care units?

2- Material and method

Design

The study followed a correlational design.

Setting

The study was conducted in all critical care units at Alexandria Main University Hospital. They were classified as: **critical care units (CCU) (n = 2), intensive care unit (ICU) (n = 5) and emergency care units (n = 7)**. The Total number was fourteen units.

This hospital was chosen as it is the largest governmental hospital in Alexandria city that provides health care services for all the population (n= 1656 beds).

The **selection criteria of these units** were decided based on the patient's condition in these units which requires complex assessment, high intensity therapies, intervention and high quality nursing care.

Subjects:

The subjects of the study included (N=126) staff nurses who were available in the above- previously mentioned units at Alexandria Main University Hospital during the time of data collection. They were distributed as follows: **A) The critical care units** included; coronary care (n = 10) and chest unit (n = 9). **B) The intensive care units (I.C.U)** covered; burns (n = 8), surgical anesthesia (n = 11), ENT (n = 5), Maxiolo-facial surgery (n = 6) and neuro-surgery (n = 6). **C) The emergency care units** dealt with; triage (n = 8), causality (n = 31), renal disease (n = 3), urological pediatric (n = 4), unit 3 hall A and C (n = 16), and emergency care unit (n = 9). Staff nurses ranged from 5 to 31 nurses in each of these units.

Tools of the study:

The following two tools were used to collect data:

Tool I:

The work quality satisfaction index scale (WQI) was developed by Joint Commission on Accreditation of Health Care Organization (1994). The WQI is used to measure nurses satisfaction with the quality of work.⁽¹⁰⁾

It consists of six main sub-dimensions namely: Professional work environment for hospital structure (8 items), autonomy of practice in nursing environment (5 items), work worth to self and others (4 items), professional relationships (8 items), professional role enactment in staff nurses' position (5 items) and benefits of job offers (8 items). Therefore, the overall number was 38 for the above mentioned six sub-dimensions. Responses were measured on a 5-point likert-scale ranging from "4" = strongly satisfied to 0 = strongly dissatisfied.

Tool II

Depression, anxiety, stress scale (DASS), the standardized version of DASS, was developed by lovibond and lovibond (1995) to be utilized to screen

normal adolescents and adults. The DASS is a 42 item self – report inventory, which yields negative aspects of emotions, namely stress, anxiety and depression.⁽³⁴⁾ Each of the three parts of the DASS scale contains 14 items. The staff nurses were asked to use four point severity/ frequency likert scale to rate the extent to which they had experienced each state over the past week. The rating scale ranged between "0" and "3". "0" means (didn't apply to me at all); however, "1" means (applied to me to some degree or sometimes). On the other hand, "2" indicates (applied to me to a considerable degree or for a good part of time), and "3" means (applied to me very much, or most of the time). Scores for stress, anxiety, and depression were calculated by summing the scores for the relevant items.

Severity rating⁽³⁴⁾

Level	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely severe	28-	20-	34-

In addition, questions related to the socio demographic characteristics of staff nurses such as age, years of experience in nursing and in unit, were included.

Method:

- 1- Official permission from the hospital administrative authority (hospital manager and nursing service director) was obtained.
- 2- Tool one was translated into Arabic by the researcher and tested for content validity by five experts reviewers. Accordingly, modifications were done according to experts opinions. It was tested for its reliability by measuring the internal consistency of items using cronbach's alpha. The value was revealed 0.921.
- 3- Tool two was translated into Arabic by the researcher and tested for content validity by five experts in the psychiatric field. Accordingly, some changes have been made to ensure that Arabic translation gives the same meaning as the English statements, as in the statement No. 7, 26, 39 according to expert opinions. Test-retest reliability was conducted within one-week interval on 16 nurses in Critical Care Units. The Pearson correlation was highly significant for stress, anxiety and depression (0.835, 0.839 and 0.759 respectively).⁽³⁴⁾
- 4- A pilot study was done on 16 nurses (10%) of the total sample in order to test the clarity of the questionnaires and estimate the time needed to fill the questionnaires. Nurses who were included

in the pilot study were excluded from the study sample.

5- **Ethical consideration:**

- The purpose of the study was explained to all staff nurses working in critical care units.
- Data confidentiality of nurses privacy and their anonymity was assured.

6- Data were collected in the period from December 2011 to January 2012.

Statistical analysis

Data were collected, revised, coded and fed to statistical software SPSS version 16.

All statistical analysis were done applying two tailed tests, and the alpha error of 0.05. P value less than or equal to 0.05 was considered to be statistically significant.

Regarding scoring system; in the tool I the total score for each dimension was transferred into score percentage as follows:

$$\text{Score \%} = \frac{\text{Actual score}}{\text{Maximum score}} \times 100$$

The score percentage was later categorized into: low – moderate – high using the following cutoff points < 33.3% for low, 33.3% - 66.6% for moderate and >66.6% for high.

The following statistical tests were used:

A. Descriptive statistics: frequencies and percentages were employed to describe categorical data.

B. Analysis of categorical data

- Pearson’s chi square test:** it is a non-parametric statistic that is used to test the association (or relationship) between the categories of two independent samples (row and column variables) in order to reflect a real association between these 2 variables in the population.
- Mont Carlo exact test and Fishers exact test:** they are alternatives for the Pearson’s chi square test if there were many small expected values.
- Correlation analysis:** this correlation is used to test the nature and strength of relation between two quantitative / ordinal variables. The spearman correlation coefficient (rho) is expressed as the Pearson coefficient. The sign of the coefficient indicates the nature of relation (positive / negative) while the value refers to the strength of relation as follows: **weak correlation** for rho less than 0.25, **moderate correlation** for rho of value between 0.25-0.74 and **strong correlation** for values between 0.75-0.99.
- Linear regression analysis:** it is used to identify the most important factors affecting the outcome while keeping all other factors constant.

3- Results

Table 1 reveals the highest percentage of staff nurses' (42.1%) was in the age group ranging from 30 to less than 40 years. Meanwhile, the lowest percentage (4.8%) of staff nurses was in the age group of 50 years and more. In relation to years of experience in nursing about 32% of staff nurses had less than 10 years of experience in nursing, while only 26.2% had 20 years and more years of experience in nursing. Regarding staff nurses years of experience in unit, it could be observed that over half (51.6%) of staff nurses' had less than 10 years of experience compared to 12.7% of staff nurses had 20 + years and more of experience in unit.

Table (1): Demographic characteristics of staff nurses in the critical care units at Alexandria Main University Hospital (n = 126)

Demographic characteristics of staff nurses'	No.	%
Age		
20-	44	34.8
30-	53	42.1
40-	23	18.3
50+	6	4.8
Years of experience in Nursing		
<10	40	31.7
10-	53	42.1
20+	33	26.2
Years of experience in Unit		
<10	65	51.6
10-	45	35.7
20+	16	12.7
Total	126	100.0

Table 2 illustrates that 61.9% of staff nurses had an overall moderate level of satisfaction. The highest percentage of staff nurses were highly satisfied with WQI of professional relationship sub-dimension (30.2%) compared to only 15.1% of them who were highly satisfied in job offer the benefits sub-dimension.

Table (2): Levels of satisfaction of staff nurses with the quality of work (WQI) (n = 126).

Satisfaction with quality of work (WQI)	High level		Moderate level		Low level	
	No.	%	No.	%	No.	%
Professional work environment for hospital/ structures	37	29.4	58	46.0	31	24.6
Job properties of autonomy	37	29.4	68	54.0	21	16.7
Work worth to self and others	34	27.0	62	49.2	30	23.8
Professional relationships	38	30.2	69	54.8	19	15.1
Professional role enactment	32	25.4	67	53.2	27	21.4
Job offer the benefits	19	15.1	63	50.0	44	34.9
Overall level of satisfaction	24	19.0	78	61.9	24	19.0

< 33.3% low level <33.3% - 66.6% moderate level >66.6% high level

Table 3 shows that the almost half of staff nurses were normal on the depression and stress levels (49.2%, 48.4%) respectively. Meanwhile, one third of them (31.0%) had a normal level of anxiety.

On the other hand, severe and extremely severe levels of anxiety were recorded by 36.5% of staff nurses compared to 14.3% and 10.3% for depression and stress levels, respectively.

Table (3): Levels of Depression, anxiety and stress of staff nurses (n = 126)

Levels	Depression		Anxiety		Stress	
	No.	%	No.	%	No.	%
Normal	62	49.2	39	31.0	61	48.4
Mild/moderate	46	36.5	41	32.5	52	41.3
Severe/extremely severe	18	14.3	46	36.5	13	10.3

Table 4 demonstrates that a significant negative weak correlation was found between the overall satisfaction of staff nurses with WQI and depression score ($\rho = -0.191, P = 0.033$). In relation to satisfaction of staff nurses with WQI sub-dimensions, a highly significant negative correlation was revealed between the professional relationship sub-dimension and depression, anxiety score ($\rho = -0.263, p = 0.003$) and ($\rho = -0.240, p = 0.007$) respectively. Furthermore, in regard to the professional role enactment sub-dimension a highly significant negative correlation, was found with depression score ($\rho = -0.236, p = 0.008$). On the other hand, a significant negative correlation was shown with the anxiety and stress scores ($\rho = -0.213, p = 0.017$ and $\rho = -0.229, p = 0.010$), respectively.

Table (4): Correlation coefficient between satisfaction of staff nurses with the quality of work and scores of depression, anxiety and stress.

Satisfaction with quality of work (WQI)	Depression		Anxiety		Stress	
	ρ	<i>p</i>	ρ	<i>p</i>	ρ	<i>p</i>
Professional work environment for hospital/ structures	-0.054	0.545	-0.019	0.834	-0.066	0.466
Job properties of autonomy	-0.091	0.310	-0.078	0.386	-0.060	0.503
Work worth to self and others	-0.065	0.469	-0.033	0.715	-0.026	0.775
Professional relationships	-0.263	0.003**	-0.240	0.007**	-0.123	0.169
Professional role enactment	-0.236	0.008**	-0.213	0.017**	-0.229	0.010**
Job offer the benefits	-0.165	0.066	-0.101	0.259	-0.114	0.203
Overall level of satisfaction	-0.191	0.033*	-0.147	0.100	-0.134	0.135

* Significant value at $P \leq 0.05$ ** Highly significant value at $P \leq 0.01$ Weak correlation for ρ less than 0.25 Moderate correlation for ρ of values between 0.25-0.74 Strong correlation for values between 0.75-0.99.

Table 5 model revealed that professional relationships sub-dimension and professional role enhancement sub-dimension were the most important factors inversely affecting depression, anxiety and stress keeping all other factors constant. The increased level of professional relationship was

followed by the decreased depression and anxiety scores by about 0.10 and 0.11 points, respectively. In addition, the increased level of professional role enactment was followed by decreased levels of depression, anxiety and stress by 0.07, 0.09 and 0.10 scores, respectively.

Table (5): Stepwise linear regression for factors affecting levels of depression, anxiety and stress.

Levels	Factor(s)	B	SE	P	R square
Depression	(Constant)	6.6	2.09	0.002	0.11
	Professional Relationship	0.10	0.04	0.017	
	Professional Role Enactment	0.07	0.04	0.096	
Anxiety	(Constant)	8.5	2.104	0.000	0.12
	Professional Relationship	0.11	0.043	0.012	
	Professional Role Enactment	0.09	0.043	0.050	
Stress	(Constant)	12.7	2.159	0.000	0.06
	Professional Role Enactment	0.10	0.044	0.025	

Table 6 shows the significant association between type of units and overall satisfaction of staff nurses with quality of work (WQI) ($\chi^2 = 10.197$ and $P = 0.037$). In addition, 28.2% of those nurses working in emergency care units and 5.6% in

intensive care units and 10.5% in the critical care units were highly satisfied with WQI.

Furthermore, a highly significant positive association existed between the type of units and each of: professional work environment for hospital

structure sub-dimension ($\chi^2 = 13.525, P = 0.009$), work worth to self and others sub-dimension ($\chi^2 = 15.544, P = 0.005$) and professional relationship sub-

dimension ($\chi^2 = 20.027, P = 0.000$) as well as a significant association with job offer the benefits' ($\chi^2 = 10.132, P = 0.038$).

Table (6): Relationship between the type of units and the overall satisfaction of staff nurses with the quality of work (WQI) (n = 126)

Satisfaction with quality of work (WQI)		Type of Units								χ^2 P
		Emergency Care (n = 71)		I.C.U. (n=36)		Critical Care Unit (n=19)		Total (n=126)		
		No.	%	No.	%	No.	%	No.	%	
Professional work environment for hospital/ structures	High level	28	39.4	7	19.4	2	10.5	37	29.4	13.525 0.009**
	Moderate level	23	32.4	22	61.1	13	68.4	58	46.0	
	Low level	20	28.2	7	19.4	4	21.1	31	24.6	
Job properties of autonomy	High level	26	36.6	7	19.4	4	21.1	37	29.4	4.401 0.354
	Moderate level	34	47.9	23	63.9	11	57.9	68	54.0	
	Low level	11	15.5	6	16.7	4	21.1	21	16.7	
Work worth to self and others	High level	28	39.4	5	13.9	1	5.3	34	27.0	15.544 0.005**
	Moderate level	28	39.4	23	63.9	11	57.9	62	49.2	
	Low level	15	21.1	8	22.2	7	36.8	30	23.8	
Professional relationships	High level	27	38.0	6	16.7	5	26.3	38	30.2	20.027 0.000**
	Moderate level	40	56.3	23	63.9	6	31.6	69	54.8	
	Low level	4	5.6	7	19.4	8	42.1	19	15.1	
Professional role enactment	High level	22	31.0	5	13.9	5	26.3	32	25.4	7.010 0.135
	Moderate level	31	43.7	25	69.4	11	57.9	67	53.2	
	Low level	18	25.4	6	16.7	3	15.8	27	21.4	
Job offer the benefits	High level	16	22.5	3	8.3	0	.0	19	15.1	10.132 0.038*
	Moderate level	36	50.7	18	50.0	9	47.4	63	50.0	
	Low level	19	26.8	15	41.7	10	52.6	44	34.9	
Overall level of satisfaction	High level	20	28.2	2	5.6	2	10.5	24	19.0	10.197 0.037*
	Moderate level	38	53.5	28	77.8	12	63.2	78	61.9	
	Low level	13	18.3	6	16.7	5	26.3	24	19.0	

< 33.3% low level, 33.3% - 66.6% moderate level, >66.6% high level * Significant value at $P \leq 0.05$ ** Highly significant value at $P \leq 0.01$

Table 7 illustrates that there was no significant association between type of units and depression level ($\chi^2 = 5.783, P = 0.216$), anxiety level ($\chi^2 = 6.365, p =$

0.174) and stress level ($\chi^2 = 2.289, P = 0.683$) of staff nurses.

Table (7): Relationships between type of units and depression, anxiety and stress level of staff nurses (n = 126).

Levels of DAS		Type of units								χ^2 P
		Emergency Care		I.C.U.		Critical Care Unit		Total		
		No.	%	No.	%	No.	%	No.	%	
Depression Level	Normal	40	56.3	16	44.4	6	31.6	62	49.2	5.783 0.216
	Moderate	20	28.2	16	44.4	10	52.6	46	36.5	
	Severe/ extremely Severe	11	15.5	4	11.1	3	15.8	18	14.3	
Anxiety Level	Normal	26	36.6	9	25.0	4	21.1	39	31.0	6.365 0.174
	Moderate	21	29.6	10	27.8	10	52.6	41	32.5	
	Severe/ extremely Severe	24	33.8	17	47.2	5	26.3	46	36.5	
Stress Level	Normal	36	50.7	17	47.2	8	42.1	61	48.4	2.289 0.683
	Moderate	26	36.6	16	44.4	10	52.6	52	41.3	
	Severe/ extremely Severe	9	12.7	3	8.3	1	5.3	13	10.3	

* Significant value at $P \leq 0.05$ ** Highly significant value at $P \leq 0.01$

4- Discussion

The quality of work is important to nursing as a profession and to nurses themselves.⁽³⁵⁾ Satisfaction of staff nurses with quality of environmental work is considered an important component of nurses lives that can impact on their moral, retention, job performance, commitment to the organization and may impact on their health outcome.⁽³⁶⁾

In the present study, the majority of staff nurses scored moderate level of satisfaction with quality of work (WQI). Moreover, the highest percentage of staff nurses' highly satisfied with WQI was in professional relationships sub-dimension and the lowest percentage of staff nurses' highly satisfied with WQI was in job offer the benefits sub-dimension. This may be attributed to the fact staff nurses are receiving support from physicians, their colleagues as well as their head nurses when they are taking nursing decisions toward their patients. The effective working relationships between them results from recurrent contact with each other's all over 24 hours. These results are consistent with Abu-Bader (2000) who stated that job satisfaction lead to positive employment relationships and high levels of individual job performance.⁽³⁷⁾ In the same line, Daud (2010) concluded that strong relationships and cohesiveness among employees in the work place will improve their satisfaction with quality of work and a sense of commitments.⁽³⁸⁾

In addition to, Greyling and Stank (2010) they stated that poor communication and in-coordination between nursing staff in units may results in feeling bored with and restlessness about their job.⁽³⁹⁾

However, Kanstantions and Christina (2008) assured that problems in professional relationships were manifested in the lack of collaboration between doctors and nurses, conflicts between nurses and doctors and lack of doctor's respect for nurses' opinions and their participation in decision making about patients care.⁽⁴⁰⁾

On the other hand, the lowest percentage of staff nurses' highly satisfied with WQI was in job offer the benefits sub-dimensions. This may be attributed to the fact that, they were not given opportunities in job with benefits. These are: additional financial benefits other than salary, adequate funding for health care premiums, sick leave, vacation as well as satisfactory work hours pattern. This result was supported by Mchugh et al., (2012) they concluded that, nurses are dissatisfied with their health benefits. In addition, they highlighted the need for benefits review to make nurses more comfortable.⁽⁴¹⁾ Furthermore, Blythe et al., (2005) stated that 13% of staff nurses' receive additional pay percentage in the lieu of benefits.⁽⁴²⁾ The same was found by Coshow et al., (2009) who concluded that organizations channeling their efforts on retaining nurses by investing in areas that result in

a higher job satisfaction, such as staffing, fulfillment, benefits and pay.⁽⁴³⁾

Similarly, Artz (2010) found that fringe benefits are significant determinants of job satisfaction.⁽⁴⁴⁾

Conversely, Wang et al., (2003) reported that, staff nurses on their job satisfaction were at a moderate level (73.10%), due to their satisfaction with their recognition, salary, benefits and working condition.⁽⁴⁵⁾

Furthermore, the results of the current study revealed that the highest percentage of staff nurses have severe and extremely severe level of anxiety compared to the lowest percentage of them who have severe and extremely severe level of stress and depression. This result could be attributed to the possibility that the level of anxiety experienced can precipitate stress and depression. When anxiety is prolonged or extremely severe a nurse may develop crippling physical or psychological symptoms and decreased cognitive problem-solving abilities related to patient care as well as the healthcare provider, and an altered spiritual state with hopelessness towards job. This result was also proved by Kendler et al., (1999) who stated that a strong link between stress and depression has been evidenced.⁽⁴⁶⁾ According to Rusli et al., (2008) they concluded that, anxiety was directly related to depression as well as stress which was directly related to anxiety and depression.⁽⁴⁷⁾

On the other hand, Antindanbila et al., (2012) concluded in their study that though there were significant levels of stress, the levels of depression and anxiety at the same unit were not significant. It is possible that the level of anxiety experienced does not reach the level that can precipitate stress and depression.⁽⁴⁸⁾

As found in the current study, a negative correlation co-efficient was evident between overall staff nurses' satisfaction with WQI and depression level. This finding assured that the more increased staff nurses' satisfaction with WQI, the more decreased their depression level. This finding could be due to the fact that the work environment in which staff nurses work have some professional development, recognition for achievement, autonomy of practice, work worth to self and others and professional relationships. As a matter of fact, compensation has been as a factor influencing staff nurses' satisfaction so that it results in increasing satisfaction with the quality of work. All of these factors have an impact on nurses retention and their performance with their patients. In addition, they influence the organization and maintain the staff nurses' health status. The same was found by Kettle (2002) who reported that job satisfaction of the nursing staff results in less turnover, better quality patient care, less-physical and mental injuries to health care staff and betterment of the entire organization.⁽⁴⁹⁾

According to, Khani *et al.*, (2008) they concluded that ineffective communication, inadequate salary, lack of autonomy and recognition are the leading factors for increased nurses' job dissatisfaction that lead to emotional problems.⁽⁵⁰⁾

In addition, Stokland *et al.*, (2013) reported that nurses were significantly less satisfied with their job. Moreover, their depression prevalence was found in 28.4% of them.⁽⁵¹⁾

Furthermore, the findings of the current study revealed that the most important sub-dimension in overall satisfaction of staff nurses with WQI were professional relationships and professional role enactment sub-dimensions. With the increasing level of these sub-dimensions the level of anxiety, stress and depression will decrease. This may be attributed to the fact that professional relationship, working together and communication in units to deliver healthcare to patient are essential to staff nurses' work in order to provide the best care for patients in different treatment situations, specific illness, and take responsibility towards their own work and respecting the contributions of all their colleagues. This result was supported by Ramasodi (2010) who stated that staff professional relationships is one of the most important factors in job satisfaction that in turn leads to increased patients safety, improved quality of care and greater patient satisfaction, and maintains the mental health status of health teams.⁽⁵²⁾ Moreover, Peterson (2011) concluded in his study that the higher level of social support and professional relations in the work place would be associated with more positive nurse well being.⁽⁵³⁾ In this respect, Hajbaghery *et al.*, (2012) concluded that improving the coordination within hospital subsystems and improving the managers and nurses relationships may decrease the stressors in nursing profession.⁽⁵⁴⁾ Likewise, relationships with other staff co-workers, physicians, head nurses, other departments were the predictors of psychological distress.⁽⁹⁾

Another cause for the current study finding could be that the professional role enactment may be attributed to the actual performance of tasks and activities associated with nurses' roles, as delimited according to: policies experience, context of practice, and competencies, and infinite work associated with staff nurses' positions that lead to providing a variety of clinical challenges and increasing the overall satisfaction.

From the point of view of Albion *et al.*, (2005) multiple work roles contribute to significant amount of occupation related to stress amongst nursing staff as well as lower level of morale and lower job satisfaction.⁽⁵⁵⁾ In addition, White *et al.*, (2008) reported that task overlap, role ambiguity, lack of understanding of professional role contributes to

duplication of effort, tension in the work place and not always optimize the quality of patient care.⁽⁵⁶⁾ In this respect, Leiter and Maslach (2009) found that professional role enactment were positively associated with job dissatisfaction and intent to quit.⁽⁵⁷⁾

Finally, in the current study the findings revealed that there was no significant association between the type of units and level of DASS, but the type of units is effected by overall satisfaction of staff nurses' with WQI. Moreover, it was observed that the high level of the overall staff nurses' satisfaction with WQI was in the emergency care units and a significant positive association was found in the professional work environment for hospital structures, work worth to self and others, professional relationships and job offers the benefits sub-dimensions. This result could be attributed to the fact that staff nurses in these units maintain the consistency across the continuum of care and possibility the recovery of these patient and staff nurses taking on increasingly autonomous roles in the care and treatment of these patients as well as local accessibility to their services and early recognition of life-threatening illness or injury. All of these situations can strengthen the nurses' self-esteem and work worth to self and others. These results are consistent with Randle (2003) who stated that nurses with healthy self-esteem are likely to deliver therapeutic patient care.⁽⁵⁸⁾ Furthermore, Michael (2012) study concluded that working with another in a helping relationship is challenging and rewarding; therefore, it gives a sense of involvement and helps in handling personal stresses.⁽⁵⁹⁾

This result goes relatively with Konstantinos and Christina (2008) who reported that nurses who have low levels of stress will have collaborative relationships with doctors and others nurses. In addition, vast of job, cooperation, working environment, inter-professional working and autonomy can foster low stress and high job satisfaction for the staff.⁽⁶⁰⁾ In this respect, Jelastopulu *et al.*, (2013) concluded that stress and quality of work satisfaction are negatively related and that the department where the participants worked play a significant role in their work performance.⁽⁶¹⁾ Moreover, Carls (2014), assumed that the emergency unit creates a practice environment that encourages critical thinking, using shared governance, and participation of staff members in organizational and managerial decision-making processes, and supports autonomous decision making occurred within this unit.⁽⁶²⁾

In this respect, Hooper *et al.*, (2010) concluded that 82% of emergency nurses had moderate to high levels of burnout scores. Emergency nurses evidenced a risk for less compassion, satisfaction.⁽⁶³⁾ The current study finding contradicts with Riad *et al.*, (2013); who

concluded that emergency department nurses had the highest mean of triggers situations for compassion, fatigue and burnout subscale which are related to patients as well as system issues.⁽⁶⁴⁾

Conclusion:

Based on the findings of the current study it can be concluded that:

- The overall level of satisfaction of staff nurses' with WQI was moderate. The highest percentage of high satisfaction scores belonged to professional relationship sub-dimension and the lowest percentage was in job offer the benefits.
- There was a significant negative correlation between overall satisfaction of staff nurses with WQI and depression score, and a highly significant negative correlation was found between professional relationship sub-dimension and depression and anxiety score.
- A highly significant negative correlation existed in depression, anxiety, and stress scores of the professional role enactment sub-dimension.
- A significant association was revealed between types of units and overall satisfaction of staff nurses with WQI and highly satisfied nurses were in emergency care unit.
- There was no significant association between the type of units and nurses depression, anxiety and stress level.

Recommendation

- All nurses especially those who work in C.C.U should be screened on the three emotional states (DAS) and be given the appropriate counseling if their scores on the instruments are high, and they should have an assertiveness training and rational emotional therapy.
- All staff nurses should have training on interpersonal and social skills-team building.
- The nursing service directors should make round rotation to transfer nurses to other units within C.C.U instead of staying in that unit for a long period of time.
- Staff nurses should attend continuing education programs on staff nurses' quality outcomes such as enhancing staff nurses' satisfaction and retention by improving working condition for nurses.
- The hospital administrator must revise the hospital policy related to job offer the benefit for the nursing staff by providing them with vacation, sick leave, paid time off, health insurance trends, flexible schedules in health care and pay more attention regarding the work

related aspects to increase staff nurses' satisfaction and maintain staff nurses' health well being.

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