Relation between Job Stress, Nurses' Practices and Patients’ Satisfaction in Port Said Governmental Hospitals

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Abstract: Background: A lot of sources may lead to job stress in nursing. Nurses’ stress is an important issue as it can affect their health and may likely affect patients’ care and patients’ satisfaction. Aim: The current study aimed to explore the relation between job stress, nurses’ practices and patients’ satisfaction in Port Said Governmental hospitals. Subjects and methods: Design: A descriptive correlational research design was used in the current study. Setting: The study was conducted in Port Said governmental hospitals. Subjects: All available staff nurses who are working in the previous hospitals. Subjects were receiving direct care from the study nurses at time of data collection. Tools: Three tools were used for data collection; Job stress scale, nurses’ practice assessment check list and Munich patients’ satisfaction scale. Results: indicated that, while 74.0% of the studied nurses were suffering from high job stress, 63.9% of them had satisfied practice scores, and 63.0% of the studied patients were unsatisfied regarding care provided. Conclusion: there were negative non-significant statistical correlations between total stress scores among the studied nurses, with their total nurses’ practices, and total patients’ satisfaction regarding care provided. Recommendations: Future strategies and periodical studies to reduce workplace stress on nursing staff, focusing on nurses’ stress and patients’ satisfaction in the hospital should be implemented to keep up with the change of the phenomena.

Key words: Governmental Hospitals, Job stress, Nurses’ Practice, Patients’ Satisfaction

INTRODUCTION

Nursing is one of the human service professions and is specifically vital in the medical and mental health care delivery. Nurses are involved in the various units of the hospital administration as clinical staff and the nature of their work make them highly vulnerable to stress and burnout syndromes (Khamisa, Peltzer, & Oldenburg, 2013). Nurses face a wide variety of challenges and demands while caring for their patients and families. While nurses are an important part of healthcare, both for their compassion and care and for their skills at the bedside, they can become stressed and burned out. Compassion satisfaction is essential for nurses in today’s society. Compassion satisfaction has been defined as the pleasure an individual derives from being able to help. Others and do their work to the best of their ability (Greene, 2017).

Daily exposure to patients’ pain and suffering, heavy workload, and poor working conditions cause high levels of occupational stress for nurses (Mami, Mehdian & Davoodian, 2014). Occupational stress, in turn, undermines nurses’ self-confidence and concentration, increases their irritability, brings them sleep disorders and job burnout, and thereby, negatively affects their happiness and care quality (Ju, Kwon & Nam, 2015; Vargas & Dias, 2011).

Occupational stress, a common occurrence among various professions worldwide, is regarded as a major occupational health problem for healthcare professionals especially nurses. Occupational stress has been reported to affect job satisfaction and job performance among nurses, thus compromising nursing care and placing patients’ lives at risk. Stress is a complex phenomenon resulting from the interaction between individuals and the environment. Therefore, significant differences in occupational stress, job satisfaction and job performance among nurses may exist due to different work settings (Nabiryé, Brown, Pryor & Maples, 2011).

Nurses’ Practices in day to day contact with patients have the opportunity to assess potential patients problems, discuss medical regimens and give teaching about all aspects of care, these includes maintaining physical activity, recognizing activity limitations, conserving energy, following dietary modification and adhering to medical treatments, in addition to advice modification of life style that best suit to those patients (Lois, Gena & Wendy, 2013).

Patient satisfaction is the extent of the resemblance between the expected quality of care and the actual received care. Patients’ satisfaction with nursing care has been reported as the most important predictor of the overall satisfaction with hospital care and an important goal of any health care organization, in addition; the level of satisfaction will be low
if the services do not meet what the patients have wished. However, the patients will show a high level of satisfaction if their expectations are met. In addition, patients will feel highly satisfied and delightful if services are even better than what they have expected (El-Naggar, Ahmed, Elsayed & Khamis, 2013; Vadhana, 2012).

Significance of the Study:
Nursing is considered as one of the most stressful professions. Stressors in nurse’s life may affect nursing care. Stress at the workplace may have negative consequences on nursing performance and turnover adversely affect nursing care. Patient satisfaction surveys are essential in obtaining a comprehensive understanding of the patient’s need and their opinion of the service received. It is a vital tool in evaluating the quality of healthcare delivery service in hospital, as it is considered an important outcome criterion; it is also an important measure when the quality of nursing care is assessed. So, it was important from the researchers’ point of view to assess the different types of stressors facing the nurses and assessing to what extent they are affecting their nursing practices and patients’ satisfaction at Port Said Governmental Hospitals.

Aim of the study:
The aim of this study was to explore the relation between job stress, nurses’ practices and patients’ satisfaction in Port Said Governmental hospitals.

The Objectives of this study are to:
1. Assess job stress among studied nurses.
2. Measure an extended set of role expectation conflict, anxiety, time stress, coworker support and work-life balance.
3. Assess nurse’s practice regarding basic care provided to patients in Port Said Governmental hospitals.
4. Assess patient satisfaction with quality of nursing care in Port Said Governmental hospitals.
5. Find out the relation between job stress, nurses’ practices and patients’ satisfaction in Port Said Governmental hospitals.

SUBJECTS AND METHOD

TECHNICAL DESIGN

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

Setting:
This study was carried out at internal medicine wards in Port Said Governmental hospitals (Port Said General Hospital, Port Fouad General Hospital and El-Zohor Central Hospital).

Subjects:
The subject of this study will be includes two group as the following
1. All available staff nurses who are working in the above mentioned hospitals in the time of data collection with total number (118) nurses.
2. All available male and female adult patients who were receiving direct care from the study nurses at time of data collection in the previous mentioned hospitals.

Inclusion Criteria for Patients:
- Hospitalization period is not less than five days.
- Patient who are able to communicate.

Inclusion Criteria for Nurses:
- Level of experience not less than one year.

Tools for data collection:
Three tools were used for data collection:

Tool I: Job Stress Scale:
It was adapted from the new job stress scale which was developed by Shukla & Srivastava, (2016) in English languages and translated into Arabic language by researcher to measure an extended set of role expectation conflict, anxiety, time stress, coworker support and work-life balance. It is scale consisting of 22 items classified into five topics of stressors; role expectation conflict (5 items), anxiety (5 items), coworker support (4 items), time stress (4 items), and work-life balance (4 items).

It was adapted from the new job stress scale which was developed by Shukla & Srivastava, (2016) in English languages and translated into Arabic language by researcher to measure an extended set of role expectation conflict, anxiety, time stress, coworker support and work-life balance. It is scale consisting of 22 items classified into four topics of stressors; role expectation conflict (5 items), anxiety (5 items), coworker support (4 items), time stress (4 items), and work-life balance (4 items).

Scoring system: Each items in topics 1 (role expectation conflict), 2 (anxiety), and 4 (timestress) was scored as; 1 for strongly disagree, 2 for disagree, and 3 for undecided, 4 for agree, and 5 strongly agree (18 item ×5=90). In topic 3 (coworker support); each question was scored as; 1 for never, 2 for very occasionally, 3 for sometimes, 4 for often, 5 very often, and 6 for all the time (4×6=24). Total score for all items ranged from 22 to 114 (90+24). Total score was classified as high job stress (≥ 60 %) and low stress (< 60).

Tool II: Nurses’ Practice assessment Check List:
It was adapted from Mahmoud (2018) in Arabic languages to assess nurse’s practice regarding basic care provided to patients covering vital signs (25) items, pain assessment (5) items, intravenous infusion (25) items, oxygen therapy (10) items, blood transfusion (24) items, measurement of weights (5) items, glucose testing (6) items. Each scored zero for (not done) and 1 for (done). Total points were ranged from zero to 100 scores; satisfactory (≥70), unsatisfactory (<70).

In addition to, personal characteristics and work related data of the studied nurses was added, it developed by the researcher after review of literature. It includes age, gender, marital
status, residence, educational level, years of experience, and monthly income.

**Tool III: Munich Patient Satisfaction Scale (MPSS):**
This tool is adapted from Merkouris, Yfantopoulos, Lanara, & Lemonidou (1999) in English and translated to Arabic language by the researchers and juried to assess patient satisfaction with quality of nursing care. It includes items regarding patient satisfaction with nursing care. The scale consisting of 18 items with 15 sub items, which including patients’ satisfaction about; everyday needs, relief of pain, nursing instructions, nursing available time, continuity of nursing care, kindness of nursing staff, respect, interest-contact, personal preferences, professionalism of the nursing staff, effectiveness of nursing care, nursing procedures, response-speed, time for rest and sleep, cleanliness, medications, participation in care, and information from the nurse. Each item scored from 1 to 5 as (excellent, very good, good, fair and poor). The total score was calculated (110).

In addition to, personal characteristics of the studied patients questionnaire was added, it developed by the researcher after review of literature. It includes age, gender, marital status, educational level, and monthly income.

**OPERATIONAL DESIGN**
Operational design included the preparatory phase, tool validity, tool reliability, pilot study, and fieldwork.

**Preparatory phase:**
A review of current recent related literature and theoretical knowledge was done using books, articles, periodicals, magazines, and internet search to develop the tools for data collection.

**Validity of tools:**
Validity of the three tools was checked by a panel of nine experts from academic medical surgical nursing staff, psychiatric nursing staff, nursing administration staff and nursing staff provide direct patients care; modifications were done based on their opinions. The validity of the research tools was preserved following a translation and back-translation procedure by bilingual experts in English and Arabic languages.

**Reliability of tools:**
Tools were tested for reliability using Cronbach's Alpha test which Arabic version of the Job Stress Scale was = 0.88 which indicates that the Arabic version demonstrated excellent scale reliability. In addition to, the tool of the Arabic version of Nurses’ Practice assessment Check List was tested for reliability using Cronbach's Alpha test was = 0.85 which indicates that the Arabic version demonstrated excellent scale reliability. As well as, the tool of the Arabic version of Munich Patient Satisfaction Scale was tested for reliability using Cronbach's Alpha test was= 0.82 which indicates that the Arabic version demonstrated excellent scale reliability.

**Pilot study:**
A pilot study was carried out on 15 patients and 12 nurses (10%) in order to test clarity and applicability of the tool. The pilot study was also used to estimate the time needed for each subject to fill in the questions. Modifications were done based on the results of the pilot study. Those who shared in the pilot study were excluded from the main study sample.

**Field work:**
The actual field work started from April to June 2018. A formal letter was issued from the Faculty of Nursing Port Said University to hospitals directors to obtain approval for conducting this study. The researcher visited the hospitals two days every week to collect the data by using previous tools. A number of 4-6 nurse and 6-8 patients were interviewed per day. Each interview lasted for about from 30-45 minutes according to the participants’ attention, concentration, and willing to cooperate or talk.

**ADMINISTRATIVE DESIGN**
An official permission was obtained from director of Port Said governmental Hospitals before conducting the study explaining the aim of the study to obtain the permission for data collection. Additional oral consents were taken from patients and nurses who participated in the study after explanation of study aim.

**Ethical considerations:**
Informed oral consent was obtained from patients and nurses. Who were informed about the nature of the study, and the right to withdraw at any time. Confidentiality of their names and information was regarded and anonymity is guaranteed

**STATISTICAL DESIGN**

**Statistical Analysis:**
After data collection, they were coded and transferred into special design formats to be suitable for computer feeding. The Statistical Package for Social Science (SPSS) version 20 was utilized for statically analysis and tabulation as well as some graphic presentations of the results. Statistical significance and associations were assessed using the arithmetic mean, standard deviation (SD), chi square ($X^2$), and coefficient correlation ($r$) to detect the relations between the variables.

- Non-significant (NS) $p > 0.05$
- Significant (S) $p \leq 0.05$
- Highly significant (HS) $P < 0.001$
RESULTS

Table (1): Distribution of Studied Nurses according to Their Personal Characteristics (N=118)

| Item                        | N   | %   |
|-----------------------------|-----|-----|
| Age                         |     |     |
| 18< 30                      | 53  | 44.9|
| 30< 40                      | 51  | 34.2|
| ≥ 40                        | 14  | 11.9|
| Mean ± SD=28 ± 9.4          |     |     |
| Sex                         |     |     |
| Male                        | 7   | 6.0 |
| Female                      | 111 | 94.0|
| Marital status              |     |     |
| Single                      | 16  | 14.0|
| Married                     | 92  | 78.0|
| Divorced                    | 5   | 4.0 |
| Widowed                     | 5   | 4.0 |
| Residence                   |     |     |
| Urban                       | 95  | 80.5|
| Rural                       | 23  | 19.5|
| Education                   |     |     |
| Secondary technical School of Nursing | 66  | 55.9|
| Technical institute of nursing | 32  | 27.1|
| BSC.s                       | 20  | 17.0|
| Income                      |     |     |
| Enough                      | 43  | 36.4|
| Not enough                  | 75  | 63.6|
| Experience/year             |     |     |
| < 1                         | 25  | 21.2|
| 1≤ 2                        | 21  | 17.8|
| 2≤ 4                        | 16  | 13.6|
| ≥ 4                         | 56  | 47.4|

Table 1 reveals that; 44.9% the studied nurses aged between 18 years to < 30 years old, 94.0% of them were females, and 78.0% of them were married. Regarding level of education, monthly income, and years of experience; it was noticed that, 55.9% of the studied nurses had secondary technical school of nursing of education, 63.6% of them had not enough monthly income, and 47.4% of them had more than 4 years of work experience.

Figure (1) Total Job Stress Scores among Studied Nurses

Figure 1 illustrates that 74.0% of the studied nurses were suffering from high job stress.
Figure (2) Total Practice Scores of the Studied Nurses

Figure 2 shows that 63.9% of the study nurses had satisfied practice scores regarding common applied nursing procedures.

| Table (2): Distribution of the Studied Patients according to Their Personal Characteristics (n=150) |
|---------------------------------------------------------------|
| Personal characteristics | No. | %      |
| Age                |     |        |
| 20-                | 5   | 3.3    |
| 30-                | 35  | 23.3   |
| 40- ≤50            | 66  | 44.0   |
| Mean±SD=           | 44  | 29.3   |
| Marital status     |     |        |
| Single             | 33  | 22.0   |
| Married            | 117 | 78.0   |
| Education          |     |        |
| Illiterate         | 35  | 23.3   |
| Read & Write       | 16  | 10.7   |
| University         | 43  | 28.7   |
| Mean±SD=           | 56  | 37.3   |
| Duration of hospitalization (days) |     |        |
| Less than 5 days   | 77  | 51.3   |
| 5 or more days     | 73  | 48.7   |
| Mean ±SD=          | 5.8±2.1 |

Table 2 displays that studied patient their age ranged between 20 < 50 years old with mean age ±SD 33.3±6.3 years, the majority of them 44.0% in age group from 40 to less than 50 years. Most of them 78.0% were married, and more than one third 37.3% had university education. Finally more than half 51.3% hospitalized less than five days.
Figure (3) Total Satisfaction Scores of Studied Patients regarding Nurses' Practice (No: 150)

Figure 3 shows that 63.0 % of the studied patients were unsatisfied regarding care provided by the studied nurses.

Table (3): Relation between Job Stress among Studied Nurses and their Personal Characteristics (No: 118)

| Personal characteristics | Total Stress | Test of Significance |
|--------------------------|--------------|----------------------|
|                          | High stress  | Low stress           | X² | P-value   |
|                          | (79)         | (39)                 |    |           |
| Age                      |              |                      |    |           |
| 18< 30                   | 29           | 24                   | 8.55 | 0.014*   |
| 30< 40                   | 37           | 14                   |     |           |
| ≥ 40                     | 13           | 1                    |     |           |
| Sex                      |              |                      |    |           |
| Male                     | 6            | 1                    | 3.12 | 0.077    |
| Female                   | 73           | 38                   |     |           |
| Marital status           |              |                      |    |           |
| Single                   | 14           | 2                    | 6.66 | 0.083    |
| Married                  | 57           | 35                   |     |           |
| Divorced                 | 3            | 2                    |     |           |
| Widowed                  | 5            | 0                    |     |           |
| Education                |              |                      |    |           |
| Secondary technical School of Nursing | 42 | 24 | 5.96 | 0.050* |
| Technical Institute of Nursing | 19 | 13 |     |           |
| BSc.s Nursing            | 18           | 2                    |     |           |
| Income                   |              |                      |    |           |
| Enough                   | 29           | 14                   | 3.47 | 0.049*   |
| Not enough               | 53           | 22                   |     |           |
| Experience/year          |              |                      |    |           |
| < 1                      | 14           | 11                   | 14.27 | 0.003** |
| 1< 2                     | 10           | 11                   |     |           |
| 2< 4                     | 8            | 8                    |     |           |
| ≥ 4                      | 47           | 9                    |     |           |

* Significance ≤ 0.05 ** highly significant (HSP) < 0.001

Table 3 reveals that, there were statistical significant relations between total stress scoresamong the studied nurses and nurses’ age, level of education, income, and years of experience.
Table 4 reveals that, there were negative non-significant statistical correlations between total stress of the studied nurses, total nurses’ practice, and total patients’ satisfaction.

**DISCUSSION**

Nurses in their day to day contact with patients complaining from different diseases have opportunity to assess potential problems, discuss medical regimens and give teaching about all aspects of care, these include maintaining physical activity, recognizing activity limitations, conserving energy, following dietary modification and adhering to medication schedule, in addition to maintaining life style changes that best suit those patients (Lois, Gena & Wendy, 2013). Patients’ satisfaction with nursing care has become an established important predictor of the overall satisfaction with hospital care and an important goal of any healthcare organization (Goh, Ang, Chan, He, & Vehviläinen-Julkunen, 2016).

The finding of the present study denoted that nearly three quarters of studied nurses were suffering from high stress. On the same line, Nabiry et al., (2011) who study the relationship between occupational stress, job satisfaction, and job performance among hospital nurses in Kampala Uganda and stated that most of the nurses reported job stress from moderate to extreme high. These results proved that nursing is a stressful profession which affects nurses in different settings all over the world.

The study also reported that most of studied nurses had satisfied total scores of nurses’ practice in basic nursing procedures. This finding is inconsistent with a study carried out in Khartoum by Mokhtar, El Shikieri, & Rayan (2016) who studied that the relationship between occupational stressors and performance amongst nurses working in pediatric and intensive care units which reported that both stress and coping abilities influence the health and work performance of nurses. This difference may be related to different stress scores of the tow samples and different coping abilities.

Furthermore, the result displays that, most of studied patients were unsatisfied regarding care provided by the studied nurses. This may be related to suffer of most studied nurses from high stress and miss communication. The present results go in the same line with Sharew, Bizuneh, Assefa, & Habetewold, (2018) who reported that less than half of patients were satisfied with nursing care. While this finding in contrast with Buchanan, Dawkins, & Lindo, (2015) who stated that, Patients were highly satisfied with nursing care in studied emergency department, these results also disagree with Karaca & Durna, (2019) who reported that, Patients were more satisfied with the “Concern and Caring by Nurses” and less satisfied with the “Information You Were Given”.

In the light of the study findings, there was a statistically significant relation between total job stress of the studied nurses and their age, education, income and years of experience. This is probably may be due most of studied nurses reported not enough income and more than four years’ experience; this may leads to work overload and stress. The results are in contrast with a study carried out in Ghana by Godwin, Suuk, & Selorm, (2016) at the Saint Dominic Hospital, who assessing the occupational stress and its management among nurses and found that; age is associated with physical and emotional types of stressors and not associated with psychological stress.

Furthermore, this current study showed that there was a statistically significant relation between gender, monthly income and social stress. This may be logic as different sexes and monthly income are social factors and are considered social stressors. While this result is in contrast with the results of Godwin et al., (2016) who revealed that, there was no statistically significant relationship between sex, salary earned and all types of stress experienced by nurses.

The current study also showed that; there was a statistical relation between nurses’ level of education and job stress; this means that high level of education showed low scores of stress. This result is inconsistent with Khaqhani et al., (2012) who mentioned that; there was no relation between level of academic education and job stress. These differences may be related to different settings.

Finding of present study reveals that, there were negative non-significant statistically correlation between total stress of the studied nurses, total nurses’ practice, and total patients’ satisfaction. These results are consistent with a result of a study carried out by Arbabisarjou, Ajjari, Omeidi & Jalalinejad, (2013) who study relationship between job stress and performance among the hospitals nurses in year of 2012-2013 and found that there was a significant negative relationship between nurses’ performance and components of job stress. These findings reflected that stress that nurses were facing didn’t affect neither their practices nor patients’ satisfaction.
CONCLUSION

There were negative non-significant statistical correlations between total stress scores among the studied nurses, with their total nurses’ practices, and total patients’ satisfaction regarding care provided.

RECOMMENDATIONS

Future strategies and periodical studies to reduce workplace stress on nursing staff, focusing on nurses’ stress and patients’ satisfaction in the hospital should be implemented to keep up with the change of the phenomena.

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