

RELATION BETWEEN TIME MANAGEMENT AND PHYSICAL SYMPTOMS OF STRESS

Entisar Gaad-Elmoula Shabaan¹, Om Hashem Gomaa Ragab^{2*}

¹Lecturer, Medical Surgical nursing, Faculty of nursing Aswan University, Egypt

²Lecturer, Nursing Administration, Faculty of nursing Sohag University, Egypt

*Corresponding Author Email: gomhashem@yahoo.com

ABSTRACT

Nursing profession is connected with stressful situations such as unstable work time, excessive workload, paper work, and so on. Nurses should provide quality care, while avoiding stress. Time management is necessary to do so. The study **aim** is to identify the relation between time management and physical symptoms of stress.

Study design: Descriptive correlational design was carried out.

Method: sample included all nurses working in Adult Intensive Care Units (ICUs) at Aswan University Hospital.

Tools of data collection included: socio-demographic characteristic and stress level scale by Yousef (2005), evaluation of physical symptoms was developed by Abu L-Hussein and Elhelou (2010), and assessment of the time management scale was developed by Alexander (1992).

Results: the highest majority (96.7%) of nurses had moderate stress level. Around two thirds of study sample (62.3%) complies with moderate time management.

Conclusion: a highly significant correlation was found between time management and stress physical symptoms. Nursing staff can manage stress symptoms by proper time management and plan of care.

Recommendations: In service education program for time management should be included and assessed frequently in intensive care nurses.

Keywords: *Time management, Physical symptoms, Stress, Nursing staff*

INTRODUCTION

Stress is predictable sequence of a general and global phenomenon encompassing physical symptoms, such as infection, injury, muscle pain, and gastro intestinal disturbance, cardiac or psychological problems, such as fear, anger, and sadness, familial, and social dimensions. Researchers have made great efforts studying the negative effects of this stress on mental and physical health of employees for better understanding of its nature way to recognizing thus, to improve the mental health and the consequent increase in job efficiency (Rakshit and Sharma, 2016).

Stress is a naturalistic, coping response to stressors in surrounding environment. Bodies are designed with a series of automatic reactions to handle stress. Signs and

symptoms of stress may include insignificant symptoms as tiredness and disrupted sleep patterns or a major crisis as heart attack. The very dangerous issue that relate to stress is the long duration of stress incidence. It is important therefore to identify the early signs and symptoms of stress to manage it, and to prevent the major crisis of stress (Shamsuddin *et al.*, 2013).

Islam *et al.*, (2012) stated that job stress is the harmful emotional and physical responses that occur while job requirements do not complement the worker's needs, capabilities, and resources that can negatively affect health.

Time management is the effective use of time resources and a way to achieve goals. Moreover, time

management is efficient use of time for well living. Useful time management proficiency can eliminate a lot of stress and diminish its unfavorable outcomes (Marquis and Huston, 2012).

Regulation, control, and domination maintenance of time can help in the prevention of wasting, resulting in maintaining manpower and preventing turnover, increasing job satisfaction and decreasing stress symptoms among nurses (Nasri *et al.*, 2013). Jones, (2012) mentioned and recommended the following guidelines for time management: reach early to plan work, list activities to be done, prioritize activities, estimate the time needed to perform, be aware that each task does not exceed its scheduled time, permit time for unscheduled activities or mistakes, be able to say no, and organizing home life is also important.

Significance of the study

Nursing profession is considered stressful for nursing staff at all levels. They need to exhibit more efforts to face the demand of that profession. Physical symptoms of work-related stress are common. Time management can help nursing staff make stability between their occupational and individual lives more efficiently and effectively. It is important to manage their time to minimize stress for improving the quality of care, and to reduce physical complaints.

Aim of the Study

The current study aims to identify the relation between time management and physical symptoms of stress.

Study Question

What is a relation between time management and physical symptoms of stress?

Subject and Methods

Study design

Descriptive Correlation design was done.

Setting

The study was carried out at adult Intensive Care Units ICUs namely general, coronary, neurological and post-operative (ICUs) at Aswan University Hospital.

Subject

All nurses working in above-mentioned setting with total number of 61 nurses.

Tools of data collection

It was divided into three parts

Part I: Socio-demographic characteristic: unit name, sex, qualification, age, years of experience, marital status, and resident relation to the workplace. Stress level scale: was developed in Arabic by Yousef, (2005) and used by the researcher. It consisted of 32 items. Every item was scored on the 4 points Likert scale which ranged from never (1 point) to always (4points). Scores were divided into: 32-64 effective and converse stress management; 65-95 no stress but needs to improve methods of management; and 96-128 high stress level.

Part II: Physical symptoms: it was developed in Arabic by Abu L-Hussein and Elhelou (2010). The tool consisted of 10 items. Every item was scored on the 3 points Likert scale which ranged from almost (1 point) to seldom (3points).

Part III: Assessment of the time management scale: was developed by Alexander (1992) and translated in Arabic by Jarir Bookstore (1999). The tool consisted of 15 items. Every item was scored on the 3 points Likert scale which includes: never (zero), sometimes (2 points), and almost (4 points). Scores divided into: 49-60 manage time well; 37-48 some of time manage time well; 25-36 all too often a victim of time; 13-24 close to losing control; and 0-12 overwhelmed, scattered, frustrated, and probably under a lot of stress. Scores description adapted to: 49-60 manage time well; 37-48 manage time well most of time; 25-36 moderate time management; 13-24 loss of time management most of the time; and 0-12 complete loss of time management.

Reliability: The tools was reliable; it was (0.773) using Cronbach's alpha coefficient.

Validity: content validity was tested for the 3 tools by experts in the related medical surgical nursing and nursing administration.

Pilot study

To assess tools clarity and applicability and to identify problems that may be encountered during the actual data collection. A pilot study was done on 20 nurses' working in different inpatient departments. The number of nurses included in the pilot study was excluded from the study sample.

Fieldwork

An official permission was obtained from the general director of Aswan University Hospital, and the heads of designated setting. Written information consent was taken from nurses. Nurses who agreed to participate in the study were given questionnaires to fill up. Data collection was done during February 2017.

Ethical Considerations

The research protocol was approved by the pertinent authority. Participants were informed that they have the right to participate, withdraw, or refuse to participate. Confidentiality of the information was ensured.

Statistical analysis

Data entry and statistical analysis were done using SPSS 19.0 statistical software package. Data was presented using descriptive statistics done in the form of means, frequencies, and percentages. Qualitative variables compared using Pearson correlation. Statistical significance was considered at *P*-value <0.05 and highly significant at *P*-value <0.01.

RESULTS

Table 1 Revealed that, the highest percentage of the studied nurses (38.9%) had been working at general ICU, majority of them (72.1%) were females, graduated from Technical Institute of Nursing (80.3%), were > 30 years old (67.2%), had 3 - > 6 years of experience (37.7%), were single (44.3%), and the resident were near to work (47.5%).

Table 1: Socio-demographic characteristics of the studied nurses

Socio-demographic characteristics	No.	%
Unit		
- General ICU-(postoperative)	24	38.9
- Coronary ICU	17	27.9
- Chest ICU	8	13.1
- Neurology ICU	12	19.7
Sex		
- Male	17	27.9
- Female	44	72.1
Qualification		
- Bachelor degree	7	11.5
- Graduated from Technical Institute of Nursing	49	80.3
- Graduated from Nursing School (3 Years study)	5	8.2

Age / years		
- >30	41	67.2
- 30->40	17	27.9
- ≤ 40	3	4.9
Years of experience		
- > 3 years	18	29.5
- 3->6years	23	37.7
- 6-> 9 years	6	9.8
- 9 years and more	14	23.0
Marital status		
- Single	27	44.3
- Married	22	36.1
- Widow	12	19.7
Resident to work		
- Near	29	47.5
- Far	18	29.5
- Very far	12	19.7
- In another governorate	2	3.3

Table 2 showed that the majority (96.7%) of studied nurses had moderate stress level.

Table 2: Assessment of the level of stress for the studied nurses

Level of stress	No.	%	Range
Low stress level	1	1.6	32 - 64
Moderate stress level	59	96.7	65 - 95
High stress level	1	1.6	96 - 128

Table 3 illustrated that, about half of the nurses agreed that they sometimes sweat out of hands while working (49.2%), headaches outside work (57.4%), and had stomach acidity (42.6). More than one third of them agreed that they sometimes feel lower back pain, and an increase of heart palpitations during work (36.1%, and 37.7%) respectively. Moreover, more than half of nurses agreed that they feel tired and exhausted after any activity, even in simple conditions (50.8%). Less than half of them agreed that they almost feel a headache most of the work time along with joints pain and they also suffer from muscles cramps, and stomach disorders which prevent them from enjoying the food (44.3%, 39.3%, 41.0% and 39.3 respectively).

Table 3: Physical symptoms resulting from stress for the studied nurses

	Items	Almost		Sometimes		Seldom	
		No.	%	No.	%	No.	%
1.	Suffer from sweating out of my hands while working	22	36.1	30	49.2	9	14.8
2.	Suffer from headaches outside work	13	21.3	35	57.4	13	21.3
3.	Feel a headache at the most of the work time	27	44.3	14	23.0	20	32.8
4.	Feel tired and exhausted after any activity, even a simple	31	50.8	18	29.5	12	19.7
5.	Feel joints pain	24	39.3	21	34.4	16	26.2
6.	Feel lower back pain at work	21	34.4	22	36.1	18	29.5
7.	Suffer from muscles cramps	25	41.0	24	39.3	12	19.7
8.	Suffer from stomach acidity	19	31.1	26	42.6	16	26.2
9.	Suffer from stomach disorders to prevent enjoy of the food	24	39.3	17	27.9	20	32.8
10.	Feel an increase of heart palpitations during work	18	29.5	23	37.7	20	32.8

Table 4 displayed that, about two thirds of the study sample (62.3%) comply with moderate time management.

Table 4: Assessment of the level of time management for the studied nurses

level of stress	No.	%	Range
Manage time well.	0	0.0	49-60
Manage time well most of time.	21	34.4	37-48
Moderate time management.	38	62.3	25-36
Near to loss of time management.	2	3.3	13-24
Complete loss of time management.	0	0.0	0-12

Table 5, showed that there was highly significant correlation between time management and physical symptoms as they feel tired and exhausted after any

activity, even symptoms like joints pain ($r=0.001$ and 0.004 , $p<0.01$). In addition, there was significant correlation between time management and lower back pain ($r=0.036$, $p<0.05$).

Table 5: Correlation matrix for assessment of the time management and physical symptoms resulting from stress

Items			Pearson correlation coefficient
			Time management
Physical symptoms resulting from stress	1.	Suffer from sweating out of my hands while working.	0.715
	2.	Suffer from headaches outside work.	1.000
	3.	Feel a headache at the most of the work time.	0.385
	4.	Feel tired and exhausted after any activity, even a simple.	0.001**
	5.	Feel joints pain.	0.004**
	6.	Feel lower back pain.	0.036*
	7.	Suffer from muscles cramps.	0.988
	8.	Suffer from stomach acidity.	0.108
	9.	Suffer from stomach disorders prevent me from enjoy the food.	0.623
	10.	Feel an increase of heart palpitations during work.	0.474

**Correlation is highly significant at the 0.01 level

*Correlation is significant at the 0.05 level

DISCUSSION

Stress is a naturalistic response to distressing situations that affect individual's well-being. Nurses generally have to deal with their client's troubles, distress, harm, and losses. Nurses should be able to provide effective and efficient care while maintaining their personal well-being, so time management is a chef principal to do so and for preventing stress. Nurses working in intensive care units must be clever enough to detect early signs and symptoms of stress and to manage them effectively (Bruziene *et al.*, 2005).

The present study revealed that, the highest percentage of the nurses in the study group was single, females, less than thirty years of age, working at general ICU, graduated from Technical Institute of Nursing, with three to six years of work experience, with resident near to work place (Table 1). In line with this study, Ayed *et al.*, (2014) illustrated that the highest percentage of the studied nurses age was less than twenty five years, half of them were single, around two thirds of them were females, and more than half of nurses had less than five years of current job experience. While contradict in that the majority of studied nurses had bachelor degree in nursing.

From the present study findings it was evident that majority of studied nurses had moderate stress level (Table 2). This was consistent with the finding of Abdeen, *et al.*, (2013). They showed that about two thirds of nurses' had moderate level of stress. In the same line Abu L-Hussein and Elhelou (2010) illustrate that the stress level for nurses was more than two thirds. The current study findings contradict with Tajvar *et al.*, (2015), where they stated that nurses experienced high level of occupational stress.

The current study showed that, more than half of nurses agree that they almost feel tired and exhausted after any activity, even if they are simple. In the same line less than half of them agreed that they feel a headache most of the time during work along with joints pain; muscles cramps; and stomach disorders. While about half of the study sample agreed that they suffer from sweating out of hand while working, headaches outside work, and stomach acidity. In addition more than one third of them agreed that they sometimes feel lower back pain and an increase of heart palpitations during work (Table 3).

The results of the stress symptoms were similar to the results obtained by Cavalheiro *et al.*, (2008) they illustrated that the nurses who had high stress levels had more complaints of cardiovascular, digestive and musculoskeletal symptoms. Moreover Farias *et al.*, (2011) showed that physical symptoms include headache, a sensation of fatigue, leg pain, and tachycardia. In addition, these were consistent with Murray (2015) who stated that stressed persons' brain perceives a threat and start response with a number of chemical reactions that may cause physical symptoms

of stress. This include, high blood pressure, palpitation of heart, headache, sweaty hands, chest pains, muscles cramps, abdominal cramps, tightness of chest, nausea, tremor, and fatigue.

The finding of the present study displayed that about two thirds of the study sample exhibit moderate time management (Table 4). These was in agreement with the finding of Qteat and Sayej, (2014) who showed that time management in government hospitals was medium for the study sample.

The present study indicated that, highly significant correlation exists between time management and physical symptoms resulting from stress. The nurses feel tired and exhausted after any activity, even a simple and feel joints pain ($r=0.001$ and $0.004, p < 0.01$) (Table 5).

This result is agreed with Yuceler, *et al.* (2016) they stated that employees working in health sector working under time pressure that expose them to high stress which adversely affect the performance and success. Managers should educate their employees on time management to reduce stress and improve performance.

In the same line Golabli *et al.*, (2013) found that there is a significant correlation between time management and job stress. There is a significant correlation between time management and job performance and between job stress and job performance. Additionally Ayed *et al.* (2014) found that there was high statistical significant relation between job stress and physical problems resulting from stress and recommended that organization should provide continuous administrative support for workers.

While the current study results contradict with Al Khatib, (2014) who showed that there was statistically significant negative relationship between time management and perceived stress.

CONCLUSION

This study concluded that there is highly significant correlation between time management and physical symptoms due to stress. Nursing staff can manage stress symptoms by proper time management and plan of care. Therefore on job training or education program for time management must be included and assessed frequently for intensive care nurses.

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