Relationship between Effectiveness of Time Management and Stress levels among Nursing Students

Dr. Ghada Abd Elasalm Eldeeb[1], Dr. Entisar Kamel Eldosoky[2]

[1]*Lecturer of Nursing Administration, Faculty of Nursing, Menoufyia University.*
[2]*Lecturer of Adult Care Nursing 1, Faculty of Nursing, Menoufyia University*

Abstract: *Time is a scarce resource. Time management is the most effective use of available time. Nursing student experience more stress than students enrolled in other programs. The aim of the study is to compare time management and stress among 3rd and 8th levels nursing students.*
Setting: *Faculty of Nursing and Allied Health Sciences, Jazan University.*
Subjects: *Simple random sample was taken from 3rd level students (n= 45), and 8th level students (n= 45).*
Tools: *Time management questionnaire (Wyne State University, 2013) and Student Nursing Stress index (SNSI) developed by (Jones&Johnston, 1999). Results: Both groups have low levels of time management. 3rd level students have higher mean scores of time management effectiveness than 8th level students. No students in both groups have high levels of time management. Regarding stress 3rd level students have higher mean scores of stress than 8th level students. There is non statistical significant positive correlation between time management and stress.*
Recommendations: *Time management training program and stress management training programs should be given to nursing students during orientation period.*
Keywords: *time management, stress, nursing students.*

I. Introduction

Nursing students have great deal of responsibilities that can make any one to ask why a day is only 24 hours due to the nature of study in nursing such as: many exams practical and theory, assignments, hospital training, lectures(Utica Second Degree Nursing, 2013).

To use time efficiently the person should eliminate time wasters including: interruptions or distractions, poor planning and prioritization of tasks, perfectionism that is the attempt to not finish anything because it is not perfect, procrastination that is the delaying of a task without good reason, trying to do everything by yourself, inability to say no, too much social relations, in ability to delegate and disorganization (Kamen, 2014).
Six tips important for the student nurse to manage her time appropriately are: student must keep a schedule of lectures including the deadlines for assignments and examination times; plan time for meals, make time at the start of each week to organize your college and personal activities , make a to do list, limit the time consumed in social networks (Utica Second Degree Nursing, 2013).

Time is a scarce resource. Managing time and determination of priorities are essential skills for the nurse. During provision of patient care priorities can be changed rapidly according to the changes in patient condition. As a nurse to manage your time you should make a list of the required activities, determine time needed to accomplish each activity, specify time for unplanned activities, arrange activities according to priority, at the end of each day study which activities are achieved and which are remaining (Gidda et al., 2005).

There are five tips for the nurse to manage her time effectively: plan for the activities of the day in advance, perform the most important activities first, control interruptions, organize your work space and yourself, learn the art of delegation (Bynes, 2014).

Stress is a unfavorable reaction people experienced as a result of excessive workloads or other types of life demands placed up on them (Health and Safety Executive, 2007). Stress is a physical and emotional reaction an individual have due to an imbalance between what is required and what is the person is already able to achieve with the available resources (Brunero et al., 2006).

Academic stress among university students has been a topic of interest for many years. Faculty students suffer from stress due to the transitional nature of college life e.g.: many college students move away from home for the first time, leaving all previously learned support systems such as parents (McEwen 2002&Clarke 2008).

Nursing student can manage stress through using the following exercises:" nurture your spirit, daily exercise, eat natural food like fruits and vegetables, increase drinking of water, be calm, stop an undesirable thoughts or feelings and determine goals and working to achieve them" (American Holistic Nurses Association, 2014).

Aim:
This study aims to compare time management effectiveness and stress among 3rd level and 8th level nursing students at Jazan University.

Objectives:
1. Compare the level of effectiveness of time management among 3rd level and 8th level nursing students.
2. Compare the level of stress among 3rd level and 8th level nursing students.
3. Explore the relationship between time management effectiveness and stress levels.

II.   Subject and methods

Study design
Descriptive comparative study design. This design is suitable for the study aim and objectives.

Setting
Faculty of Nursing and Allied Health Sciences, Jazan University has 2 sections male and female. It has 3 departments these are: Nursing, Respiratory therapy and EMS. The study was carried out at nursing department in the female section at Faculty of Nursing and Allied Health Sciences, Jazan University, Jazan city, KSA.

Subjects
Nursing department in Faculty of Nursing and Allied Health Sciences, Jazan University has (507) students registered in the bachelor of nursing program. Students start studying in the faculty from third to eighth levels (1st and 2nd levels are preparatory, students study general subjects in other college). Researchers selected the third level students as they begin their nursing education. Also, select eighth level as they are graduating. Total number of students in the 3rd level was 120 students. However, the total number of students in the 8th level was 60 students. Simple random sample was taken from level 3 students (n= 45), and level 8 students (n= 45).

Variables:
In this study the independent variable was time management, while the dependent variable was stress.

Data collection tools:
Two different tools for data collection are used in the present study:

Tool (I)
Time management questionnaire (Wyne State University, 2013). It   consists of 22 items to assess the effectiveness of time management among nursing students. It scored as 3 points Likert scale 2 for always, 1 for sometimes, and zero for never. Student score ranged from 27 to 44 is considered as having high time management effectiveness, the score from 22 - 26 is moderate, and less than 22 as low time management effectiveness.

Tool (II):
Student Nursing Stress index (SNSI) developed by (Jones&Johnston, 1999) was used for the assessment of stress level among nursing students. The SNSI is a 25item questionnaire. SNSI consist of 4 domains validated as affecting nursing student stress levels: 1) Academic load, 2)load during clinical practice 3) Personal problems , 4) Interface worries .Responses were rated on a 5-point Likert scale: 1-Not stressful, 2- low stress, 3-moderate stress, 4- stressful, 5-Extremely stressful. The scores of the items were summed up and the total divided by the number of items, giving a mean score for the part. These scores were converted into a percent score. Stress level is considered high if the percent score were (>75), moderate (50-75) and low stress ($50>$).

The previous two questionnaires are accompanied by a part asking about socio-demographic of students. Tools of data collection were translated into Arabic and simplified to be easier for students to complete. Tools are handed to ten experts from College of Nursing and Allied Health Sciences Jazan University to assess the clarity and content validity and reliability of the questionnaire.

Administrative design:
Before starting the actual data collection process administrative approval for the research was taken from dean of College of Nursing and Allied Health Sciences.

The researcher introduced themselves, explained the objectives of the study to students, and informed them that their information will be confidential and will be used only for the purpose of the research.

Pilot study:

Before any attempt for data collection a pilot study was carried out in College of Nursing and Allied Health Sciences Jazan University for the purpose of testing reliability, clarity, applicability and comprehensiveness of the questionnaire. It was done on 10 student nurses who were excluded from the main study subjects during the actual collection of data. Pilot study aimed also at determining the time needed for filling the questionnaires which takes about 15 minutes.

Field work:

Data were collected during November 2014.

Statistical Analysis:

Results were collected, tabulated, statistically analyzed using statistical package SPSS version 20. Qualitative data was analyzed as frequency and percentages. T-test was used to find the statistical significant difference between means.

Limitations of the study:

Researchers weren`t able to increase the number of students from 3rd level due to limited number of student in 8th level. To assure equal number from both groups to be suitable for conducting comparisons.

III.   Results
Figure (1) distribution of study subjects according to age.
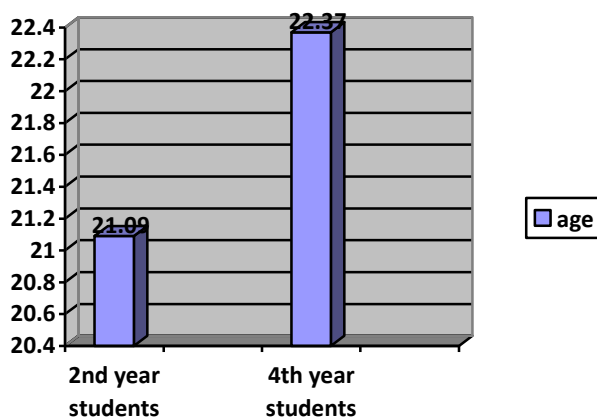
According to figure 1 the mean ages for 3rd level students is 21.09 years and the mean ages for 8th level students is 22.37 years.

Table (1) Comparison between 3rd Level and 8th Level Nursing Students regarding Levels of Effectiveness of Time Management.

Levels of Effectiveness of Time management	3rd level students (n= 45)		8th level students (n=45)		t-test	P-Value
	No.	%	No.	%		
High	0	0	0	0		
Moderate	11	24.4	19	42.3		
Low	34	75.6	26	57.7		
Mean ± SD	25.35 ± 6.5		24.17 ± 7.88		0.8	0.4

This table shows that there is no statistical significant difference between both groups regarding the level of effectiveness of time management. No students in both groups have high level of time management effectiveness. Majority of students in both groups have a low time management. 3rd level students have higher mean scores of time management than 8th level students.

Table (2) Comparison of Time Management Items` Mean Scores among 3rd Level and 8th Level Nursing Students.

	Items of Time Management	3rd level students (n=45) Mean± SD	8th level students (n= 45) Mean± SD	t-test	p-value
1.	I feel I use my time effectively.	0.8± 0.46	0.88 ± 0.48	-0.9	0.4
2.	I tackle difficult or unpleasant tasks without procrastinating.	0.8±0.44	0.96 ± 0.60	-1.3	0.2
3.	I force myself to make time for planning.	1.3±0.74	1.16 ± 0.65	0.9	0.4
4.	I am spending enough time planning.	0.76± 0.60	0.82 ±0.62	-0.53	0.6
5.	I prepare a daily or weekly "to do" list.	0.49±0.58	0.80 ± 0.81	-2.2	0.03*
6.	I prioritize my list in order of importance, not urgency.	1.43±0.71	1.34 ±0.65	0.6	0.5
7.	I am able to meet deadlines without rushing at the last minute.	1.22 ±0.51	1.24 ±0.56	-0.1	0.9
8.	I keep up-to-date on my reading and homework assignments.	1.24 ±0.56	1.04 ±0.57	0.5	0.07
9.	I prevent interruptions from distracting me from high priority tasks.	1.39±0.70	1.08 ±0 .67	2.2	0.02*
10.	I avoid spending too much time on trivial matters.	1.33±0.59	1.18 ±0 .66	1.2	0.2
11.	I am spending enough time on academic matters.	1.16 ±0.51	1.10 ± 0.58	.6	0.6
12.	I plan time to relax and be with friends in my weekly schedule.	1.02 ±0.80	1.28 ± 0.70	-1.7	0.09
13.	I have a weekly schedule on which I record fixed commitments such as classes and work hours.	1.16 ±0.80	0.76 ± 0.77	2.6	0.01*
14.	I try to do the most important tasks during my most energetic periods of the day.	1.71 ±0.50	1.36 ± 0.63	3.09	0.003
15.	I make constructive use of my commuting time.	0.73 ±0.60	0.94 ±0.55	-1.8	0.08
16.	I periodically re-assess my activities in relation to my goals.	1.00 ±0.54	1.24 ±1.5	-1.03	0.3
17.	I have discontinued any wasteful or unprofitable activities or routines.	1.16 ±0.72	1.06 ±0.62	0.8	0.4
18.	I screen and group my telephone calls to allow for control over telephone interruptions.	1.04 ±0.64	0.90 ±0.68	1.05	0.3
19.	I judge myself by accomplishment of tasks rather than by amount of activity or "busy-ness".	1.41 ±1.5	1.26 ±0.66	.63	0.5
20.	My actions are determined primarily by me, not by circumstances or by other people's priorities.	1.33 ±0.77	1.50 ±1.5	-.72	0.5
21.	I have a clear idea of what I want to accomplish during the coming semester.	1.16 ±.79	1.32 ±0.71	-1.03	0.3
22.	I am satisfied with the way I use my time.	1.12 ±0.69	1.20 ±0.70	-0.6	0.6

(*) Statistically significant
According to this table there were statistical significant differences between the two groups of students regarding three items of time management. These items are I prepare a daily or weekly "to do" list; I prevent interruptions from distracting me from high priority tasks; I have a weekly schedule on which I record fixed commitments such as classes and work hours.

Table (3) Comparison between 3rd Level And 8th Level Nursing Students regarding Stress Levels.

Stress level	3rd level students (n= 45)		8th level students (n=45)		t-TEST	P-VALUE
	No.	%	No.	%		
Low	21	46.7	26	57.8		
Moderate	22	48.9	16	35.6		
High	2	4.4	3	6.7		
Mean ± SD	49.31 ±14.6		46.36 ±21.3		0.77	0.4

Table 3 displays that 3rd level students have higher mean of stress than 8th level students. The majority of 3rd students have moderate level of stress. However majority of 8th level students have low level of stress.

Table (4) Levels of time management and stress among both groups of nursing students.

Score	Combined Time Management (3rd level + 8th level) (N=90)		Combined Stress (3rd level + 8th level Students) (N=90)	
	N	%	N	%
Low	60	66.7	47	52.2
Moderate	30	33.3	38	42.2
High	0	0.00	5	5.6

Table 4 presents the levels of time management and stress among both groups of nursing students. According to the table, majority of students in 3rd level and 8th level have low level of effectiveness of time management and low level of stress also.

Table (5) Comparison between 3ʳᵈ level and 8ᵗʰ level nursing students regarding mean scores of stress domains.

Domains of stress	3ʳᵈ level students (n= 45)		8ᵗʰ level students (n=45)		t-TEST	P-VALUE
	No.	%	No.	%		
Academic load						
Low	0	0	3	6.6		
Moderate	19	42.2	26	57.8		
High	26	57.8	16	35.6		
Mean ± SD	25.20± 4.87		22.83±5.77		1.9	0.04*
Personal problems						
Low	30	66.7	35	77.8		
Moderate	11	24.4	8	17.8		
High	4	8.9	2	4.4		
Mean ± SD	7.33±3.83		6.35±3.11		1.2	0.2
Interface worries						
Low	3	6.6	5	11.1		
Moderate	10	22.2	14	31.1		
High	32	71.1	26	57.8		
Mean ± SD	23.13±5.91		20.75±5.28		1.8	0.06
Total stress score Mean ± SD	55.65 ±10.85		49.93±10.50		2.3	0.02*

(*) Statistically significant
Table (5) shows Comparison between 3ʳᵈ level and 8ᵗʰ level nursing students levels nursing students regarding mean scores of stress domains. There were statistical significant differences between 3ʳᵈ level and 8ᵗʰ level nursing students regarding mean scores of the domain of academic load (p=0.04) and the mean score of total stress (p = 0.02) . Moreover, 3ʳᵈ level nursing students have higher mean scores in all domains of stress than 8ᵗʰ level nursing students. Additionally, the 3ʳᵈ level students have higher mean stress scores than 8ᵗʰ level students their respective mean ± SD were 55.65 ±10.85 and 49.93±10.50.

Table (6) Correlations between study Subject's Age, score of last Semester, stress and time management.

Variable	Stress		Time management	
	r	P	r	P
Age	-0.12	0.2	-.19	.05
Score of last semester	-0.1	0.3	.07	.5
Stress	1	_	0.95	0.2

Table (6) presents correlation between Age, score of last semester, stress and time management. All correlations are non significant and negative except the correlation between time management and stress is non significant and positive.

IV. Discussion

Time is an important resource and cannot be renewed (Alkhatib, 2014). The present study findings show that majority of nursing students have low levels of time management. This result is contradicted with Alkhatib (2014) who found in his study of time management among college students in UAE that college students have moderate level of time management. Moreover the result of this study is not congruent with Eid, Safan and Diab (2015) who found in their study that 58.5% of nursing students at faculty of nursing Menoufyia university, Egypt, had good time management.

Stress is defined by Albarak (2008) as "a physical, mental, or emotional response resulting from an individual's reaction to interpersonal, intrapersonal, academic & environmental hazards".
The results of this study shows that 3ʳᵈ level students have higher mean scores of stress than 8ᵗʰ level students. This result is in the same line with Gomaa (2003) who found high level of stress among second year nursing students.

The interpretation for this can be that, 3ʳᵈ level students have stress derived from establishing new relationships, and adjusting to the academic demands of class work and they are not familiar with college staff, subjects, policies and rules of the college. However 8ᵗʰ level students are already adapted with faculty rules, systems, staff and subjects.

Moreover, The findings of this study is congruent with the study of Trockel and Egget (2000) who found that nursing students have long hours of study, repeated exams, multiple assignments, lack of free time, and lack of faculty response to student needs.

Concerning correlation between time management and stress .The results of the present study show non significant positive correlation between time management and stress. This result with congruent with Yoder-wise(2011) who mentioned that " a very close relationship between stress and time management, time management is considered as a tool for reducing and preventing stress" .

V.   Conclusion

There is no statistical significant difference between 3rd level and 8th level nursing students regarding the levels of time management and stress. Both groups have low levels of time management. 3rd level students have higher mean scores of time management than 8th level students. No students in both groups have high levels of time management. Regarding stress 3rd level students have higher mean scores of stress than 8th level students. There is non statistical significant positive correlation between time management and stress.

VI.   Recommendation

Time management training program and stress management training programs should be given to nursing students during orientation period. Explaining the structure, policies of the college and study plan and methods of evaluation for students after admission on the college. Future research is needed for a larger sample of students from different faculties of nursing to help in generalize the finding.

References

[1].   Albarak M. (2008). Sources of stress as perceived by nursing student at King Saud University AL-Riyadh. Thesis proposal. KSU.KSA

[2].   Alkhatib A. (2014). Time Management And Its Relation To Students` Stress, Gender ,And Academic Achievement Among Sample Of Students At Al Ain University Of Science And Technology. UAE.

[3].   American Holistic Nurses Association. (2014). Stress Management Exercises for Nursing Students. http://www.ahna.org/Resources/Stress-Management/For-Nursing-Students/Exercises-for-Students.

[4].   Brunero S., Cowan D., Grochulski A., & Garvey A. (2006).Stress Management for Nurses. New South Wales Nurses' Association. http://www.nswnurses.asn.au/

[5].   Bynes C. (2014). 5 time Management Tips For Busy Nurses. Nursetogether.com

[6].   Clarke V. & Ruffin C. Perceived sources of stress among student nurses, Advances in Contemporary Nurse Education , 2008; 32(1):12-16.

[7].   Gidda R., Haw J., Hulkory K., Parker J., Thomposon Y. (2005). Management Workbook. School Of Health Sciences. The University Of Nottingham.

[8].   Gomaa N. (2003).Impact of two stress reduction techniques on student nurses' level of stress. Unpublished Doctoral Dissertation of Psychiatric Nursing and Mental Health. Faculty of Nursing, Port- Said University.

[9].   Health and Safety Executive. (2007). Managing the Causes Of Work-Related Stress: A Step-By-Step Approach To Using The Management Standards, London: HSE.

[10].   Kamen L. (2014). Top Ten Time Wasters. http://www.mommd.com/toptentimewasters.shtml

[11].   McEwen M. & Wills E. Theoretical basis for nursing. New York: Lippincott Williams & Wilkins, 2002.

[12].   Trockel M., Barnes M. & Egget D. Health-related variables and academic performance among first-year college students: Implications for sleep and other behaviors. Journal of American College Health, 2000; 49(3): 125-132.

[13].   Utica Second Degree Nursing. (2013). 7 Time Management Tips for Nursing Students. Utica College Accelerated Nursing Blog - Accelerated Nursing Program

[14].   WyneStateUniversity.(2013).TimeManagementQuestionnaire.UniversityAdvisingCenter. http://advising.wayne.edu/hndbk/time.php

[15].   Yoder-Wise P. (2011).Leading And Managing In Nursing.5th ed. Elsevier. USA.

[16].   Eid M. Safan S. & Diab G. (2015). The Effect of Time Management Skills And Self Esteem Of Students On Their Grade Point Average. IOSR Journal of Nursing and Health science: 4(1), pp82-88.www.iosriournals.org