

## Time management and Academic Stress of Nursing Students at Faculty of Nursing Zagazig University

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### Abstract

**Background:** In recent decades, the increase in stress levels of university students has been seen as a serious threat. Due to this problem, time management is linked to academic stress as a potential coping strategy frequently offered by university counseling services. **Aim of the study:** To assess the relation between time management and academic stress of Nursing students at Faculty of Nursing Zagazig University. **Subjects and Methods; Research design:** A descriptive research design was adopted to carry out this study. **Setting:** The present study was conducted at the Faculty of Nursing, Zagazig University. **Subjects:** Stratified random sample of 369 nursing students. **Tools of data collection:** Two tools were used for collecting data: Time management questionnaire to determine time management skills of studied nursing students. Student Nurse Stress Index to identify academic stress level among studied nursing students. **Results:** The highest percentage of nursing students had a low level of total time management skills (78.6%). The highest percentage of nursing students had a high level of academic stress (81.4%). **Conclusion:** There is no statistically significant correlation between time management skills scores and academic stress. **Recommendation:** Training and education programs must be a continuous process for refreshing and increasing nursing student knowledge and skills about the concept of time management and academic stress as well as to emphasize strategies of managing time and academic stress.

**Key words:** Time management, Academic stress, and Nursing students.

### Introduction:

Higher education is a stressful period in the life of students due to various reasons such as living away from families, a heavy curriculum, so from the moment an individual enters college, he or she is faced with various demands, especially academic demands, which will demand effort and sacrifice <sup>(1)</sup>.

The university stage involves challenges, goals, and responsibilities that must be overcome and achieved over the years; all of this involves submitting to stress. Stress has become part of student's academic life due to the various internal and external expectations put on their shoulders <sup>(2)</sup>.

Academic stress is defined as a "social fact" that affects the well-being of individuals through the repeated use of technology and academic activities that produce conflict if not properly managed <sup>(3)</sup>.

Nursing students experience stress due to different many factors including issues of time management, financial matters, interaction with lecturers, personal subjective

goals, social behavior, also an adjustment in the academic culture, lack of support system, admission process, high expectations of parents, as well as, curriculum comprised of complex concepts, unsuitable school timings, unbalanced student-teacher ratio, the physical environment of the classroom, in addition to unhealthy student-teacher interaction, hard and fast rules of discipline, too many or complex assignments, teaching methodology, furthermore unconcerned teacher's attitude and overemphasis on weaknesses rather than acknowledging strengths <sup>(4)</sup>.

Academic stress arises when academic-related demands exceed those available resources to an individual to which he/she adapts, and this stress must not be overlooked as it negatively affects the general adjustment of the students <sup>(5)</sup>.

On the other hand, it should be noted that the dilemmas of academic life are increased due to the demands to fulfill a certain academic program associated with a certain curriculum and, on top of that, the

goal of obtaining high grades is also paramount for students. All this generates stress in their academic life mainly because of a deficient or null perception of mechanisms to manage time during university life, so that students to overcome and reduce stress; they must have time management skills<sup>(6)</sup>.

Nursing students are faced with an onerous responsibility to organize their study time from their personal and/or social activities. It is necessary to take into account that students will go through periods of anxiety related to academic stress, and if they have not had a good time management of their activities, they will not be able to have an adequate control of these activities, nor will they be able to identify those that are more important to materialize their goals, thus generating a marked increase in academic stress<sup>(7)</sup>.

Time should be considered one of the most important resources in university life. Likewise, they affirm that if time is properly controlled, it will be used to its fullest extent getting the most of it for several resources. Time management is a process by which defined goals or objectives are established, determining the tools that favor time management, keeping in mind the time available and verifying the use that is given to time; that is, the perception of control that the individual has over the use of time<sup>(8)</sup>.

It is necessary to indicate that university students are willing to comply with their obligations and, therefore, with the demands of their respective academic programs; but, at the same time, they present the inconvenience of having inadequate time management, a fact that limits their achievements, time management is conceived as a series of processes that are executed to achieve established objectives.<sup>(9)</sup>

Time management tends to reduce stress levels of students; allows them to enjoy free time and regulate their performance in learning due to an effectively established study schedule that must be linked to aspects such as creativity, motivation, control, and use of resources<sup>(10)</sup>, use of time distributed according to the needs and priorities of the student reduces waste and optimizes its use, guaranteeing academic success. At this regard the levels of stress associated with

academic activity could be attenuated if time management were used<sup>(11)</sup>.

### **Significance of the study:**

The process of education is a very stressful experience and nursing students encounter a great deal of academic, personal, and social stress during their academic activities. The prevalence of academic stress among nursing students in Egypt was moderate (48.2%)<sup>(12)</sup>. In order for students to be able to overcome stress and reduce it, they must have time management skills, as it helps students organize their time and effort, improve reception and absorption of information, and manage the many and burdensome academic requirements, there are many international studies to assess time management among nursing students and academic stress among nursing students. But evidence of relating time management and academic stress among nursing students is limited.

The present study perhaps, is an effort to study the relationship between time management skills and academic stress among nursing students.

### **Aim of the study:**

The aim of the study was to assess the relation between time management and academic stress of nursing students at Faculty of Nursing Zagazig University.

### **Research Questions:**

- What is the time management skills level of nursing students?
- What is the academic stress level of nursing students?
- Is there a relationship between time management and academic stress?

### **Subjects and methods:**

#### **Research design:**

A descriptive research design was adopted to carry out this study.

#### **Study setting:**

The present study was conducted in the Faculty of Nursing, Zagazig University, which included seven scientific departments: nursing administration, psychiatric and mental health nursing, medical and surgical care nursing, maternal and newborn health nursing, pediatric nursing, community health nursing and gerontological nursing.

**Study subjects:**

A Stratified random sample of 369 nursing students from the four academic grades as following: 1st academic grade (88), 2nd academic grade (97), 3rd academic grade (117), 4th academic grade (67) from the academic year 2021-2022.

**Tools of data collection:**

Two tools were used to collect necessary data.

**Tool I: Time management** questionnaire. It was developed by **Alay and Kocak** <sup>(13)</sup>, and composed of two parts:

- **Part I:** This part developed by the researcher and used to collect personal data of nursing students that include: age, academic grade, and gender, Pre-education before enrollment to the faculty, and Reason for joining to this faculty.
- **Part II:** To determine time management skills of nursing students, consists of 27 items grouped under three sections time planning (16 item), time attitude (7 item) and time wasters (4 item),

**Scoring system:**

Subjects' response was scored on a five-point Likert scale, range from (1) = never to (5) = always, and this score is reversed for the negative statements, reversed statements of time wasters' items. The levels of time management skills as cut point from the study results namely: High time management skills (>75%), Moderate time management skills (range from (50% -< 75%), Low time management skills (less than 50%).

**Tool II: Student Nurse Stress Index:** It was developed by **Jones and Johnston** <sup>(14)</sup>. It was used to identify academic stress level among nursing students. It consists of 22 items grouped under four domains as shown namely: personal problems (4 item), clinical concerns (6item), academic load (5 item), and interface worries (7 item).

**Scoring system:**

The response to the items of the index uses 5 points, Likert-type scale. Range from (1-5) (1) = not stressful to (5) = extremely stressful. The levels of academic stress as cut point from the study results namely, High academic stress (>75%), Moderate academic stress (range from 50% -< 75%), Low academic stress (less than 50%).

**Content validity and Reliability:**

The tools were revised and content and face validity were established by panel of five experts: three assistant professors from nursing administration department at the faculty of nursing, Zagazig University, two professor of nursing administration department at the faculty of nursing, Ain Shams University. Experts were requested to express their opinions and comments on the tool and provide any suggestions for any additions or omissions of items. According to their opinions all recommended modifications were performed by the researcher. Reliability was measured by Alpha Cronbach for Time management questionnaire (0.87) and Reliability Student Nurse Stress Index (0.84).

**Fieldwork:**

The data collection phase of the study lasted two months from the beginning of October to the end of December 2022. The final form of tools of data collection was handed to students in their educational classrooms at the faculty of nursing, Zagazig University by the researcher to elicit their opinions. The purpose of the study was explained to the participated students and ways to fill in the data collection tools. They were completed at the same time of distribution and took about 20-30 minutes. The researcher checked each tool after they had been completed to ensure the completion of all information. The researcher met students three times weekly between lectures in their classrooms and after each section, the researcher collected data by herself.

**Pilot study:**

A pilot study was carried out on 37 nursing students from the different academic grades as follow: Nine students from 1st academic grade, nine students from 2nd academic grade, 12 students from 3rd academic grade and seven students from 4th academic grade to test clarity, and applicability of the tools. In addition to estimate the time required for filling the questionnaire sheets. The pilot study was conducted one week before collection of data. No modifications were done, and Students were included in the main study sample.

**Administrative and ethical considerations:**

Official permissions were obtained from the dean of the Faculty of Nursing and vice

dean for education and students' affairs after explaining the nature of the study. Verbal explanation of the nature and the aim of the study had been explained to student nurses included in the study sample. Also, individual oral consent was obtained from each participant in the study after explaining the purpose of the study. They were given an opportunity to refuse or to participate in the study, and they were assured that the information would be utilized confidentially and used for the research purpose only. Confidentiality was confirmed by writing names optionally.

### Statistical analysis:

All data were collected, tabulated and statistically analyzed using SPSS 23.0 for windows (SPSS Inc., Chicago, IL, USA). Quantitative data were expressed as the mean  $\pm$  SD & (range), and qualitative data were expressed as absolute frequencies (number) & relative frequencies (percentage). Percent of categorical variables were compared using Chi-square test. Pearson correlation coefficient was calculated to assess relationship between various study variables, (+) sign indicate direct correlation & (-) sign indicate inverse correlation, also values near to 1 indicate strong correlation & values near 0 indicate weak correlation. All tests were two sided. P-value < 0.05 was considered statistically significant (S), and p-value  $\geq$  0.05 was considered statistically insignificant (NS).

### Results:

**Table (1):** The demographic characteristics of nursing students (n=369) revealed that Slightly more than half of nursing students were in the age group ranged from 19 to 21 years old (58%). Regarding academic grade;( 23.8%, 26.3%, 31.7%, 18.2%) of students were in grade (1, 2, 3, 4) respectively, the highest percentage of nursing students were female and attended nursing faculty after finishing secondary school (76.2% & 78.6%, respectively). While (67.5 %) of studied nursing students joined nursing faculty due to their total score in secondary school.

**Table (2):** Total Levels of time management skills of nursing students (n=369). It could be observed from the table that, the highest percentage of nursing students had a low level of total time management skills (78.6%), while the lowest

percentage of students had a high level of total time management skills (7.8%).

**Table (3):** Distribution percent of academic stress level of nursing students (n=369). It could be observed from the table that the highest percentage of nursing students had a high level of academic stress (81.4 %), while the lowest percentage of them had a low level (5.4%).

**Table (4):** Relation between time management skills level and personal characteristics of nursing students (n=369). This table defined that there was statistically significant difference between time management skills level and academic grade of nursing students.

**Table (5):** Relation between academic stress level and personal characteristics of nursing students (n=369) the study finding revealed that that there are no statistically significant relations between academic stress level and personal characteristics of nursing students.

**Table (6):** Correlation between time management skills and academic stress scores (n=369) the study finding revealed that There is no statistically significant correlation between time management skills scores and academic stress.

### Discussion:

**Regarding the personal characteristics of nursing students**, slightly more than half of nursing students were in the age group ranged from 19 to 21 years old. The highest percentage of nursing students were female and attended nursing faculty after finishing secondary school, joined nursing faculty due to their total score in secondary school and the highest percentage of students were in the third grade. The possible explanation for these results may be due to that the faculty of nursing is predominantly attended by females and nursing considered a feminist career and entering of male into the faculties of nursing is recent in Egypt.

These findings were in agreement with the results of the previous studies of **Abdallah et al.** <sup>(15)</sup> and **Hamed et al.** <sup>(16)</sup> founded that the highest percentage of nursing students were in the age group 21 years old and less, the highest percentages of them were females, joining to the faculty because of their score. Furthermore, **Sabry et al.** <sup>(17)</sup> revealed that the highest percentage

of nursing students was in the age of range from 19 to 21 years old, the highest percentages of them were females, joining to the faculty because of their score and after finishing Secondary school.

Conversely, these findings disagreed with **Alhoish** <sup>(18)</sup> who mentioned that the highest percentage of nursing students was in the fourth grade. In addition, **Bekleyen** <sup>(19)</sup> who mentioned that the highest percentage of nursing students were in the second grade. In addition to a study carried out by **Abd El-Ghany et al.** <sup>(20)</sup> who founded that more than half of the students are male.

**Regarding time management skills levels** among nursing students, the finding of the present study demonstrated that the highest percentage of nursing students had a low level of time management skills. This finding could be due to most nursing students being unable to plan, set goals and don't set and honor priority, also they don't use their time constructively, in addition they spend their time in routine rather than useful class activities.

These findings were in agreement with study carried out by **Razali et al.** <sup>(21)</sup> who found that the majority of nursing students had a low level of time management skills, also coincides with that of **Mukwevho's** <sup>(22)</sup> who indicated that tertiary students have poor time management skills. Adding to these **Stewart et al.** <sup>(23)</sup> who noted that time management among students is the weakest skill that they are able to comprehend especially during the COVID-19 pandemic due to many interruptions and uncertainties. Also, **Olebara et al.** <sup>(24)</sup> who found that the lowest percentage of students had a high level of time management skills.

Conversely, these findings are in disagreement with the previous study carried out by **Ghiasvand et al.** <sup>(25)</sup> found that most of nursing students had a moderate level of time management skills. Similarity the previous study carried out by **Alyami et al.** <sup>(26)</sup> who found that nearly half of students manage their time.

**Regarding academic Stress levels among nursing students:**

The finding of the present study indicated that the highest percentage of nursing students had a high level of academic stress. This may be due to the anxiety and fear of

the students on successes in completing college programs in addition to exposure to a new environment and involvement in patient care, as well as, they spend a large amount of time in clinical areas, and some students cannot handle stress because they do not have the knowledge to overcome these stressors.

These findings in agreement with the results of the previous studies of **Simth and yang** <sup>(27)</sup>, **He et al.** <sup>(28)</sup>, **Harvey and Carter** <sup>(29)</sup>, **Hawkins et al.** <sup>(30)</sup>, and **Park et al.** <sup>(31)</sup>. They found that the nursing students had a high level of stress.

While this finding contradicted with the results of the previous studies of **Shdaifat et al.** <sup>(32)</sup>, **Bhurtun et al.** <sup>(33)</sup>, **Li and Hasson** <sup>(34)</sup>, **Onieva-Zafra** <sup>(35)</sup>, and **Devi et al.** <sup>(36)</sup>. They found that the nursing students experience a moderate level of stress.

**As regard the relation between time management skills level and personal characteristics of nursing students:**

The current study finding reveals that there was statistically significant difference between time management skills level and academic grade of nursing students.

The reason for this may be that the students at the beginning of entering the college are afraid of the new study in a new stage of their life and they have a background on how difficult the college is from the previous students, so they do their best in studying and devote most of their time in their academic life and there is constant encouragement from their families to Success and excellence, but with the passage of time they get used to the requirements of the college and think that they are able to keep up with them, in addition to the extra responsibilities that take up their time, such as working in private hospitals.

These findings are in agreement with the result of the study carried out by **Eldeeb and Eldosoky** <sup>(37)</sup> who found that the lowest time management skill level was in grade four. Also the study of **Mohammed et al.** <sup>(38)</sup> who found that the majority of fourth year nursing students had low level of time management skills. Again, **Nayak et al.** <sup>(39)</sup> who found that fourth year undergraduate nursing students have the lowest level of time management skills compared to any other academic grade.

While This findings are in disagreement with the study of **Alsalem et al.** <sup>(40)</sup> who found that there is a positive correlation between time management skills score and personal characteristic of nurse students related to gender. Also, **Goudarzian et al.** <sup>(41)</sup> who shows that the gender was good predictors to assess knowledge of nurse students regarding time management. In addition to, **Adams and Blair** <sup>(42)</sup> who found that time management behaviors were not significantly different across gender, age, entry qualification, and time already spent in the program.

#### **As regard the relation between academic stress level and personal characteristics of nursing students:**

The finding of the present study indicated that there was no statistically significant relation between personal characteristics of nursing students and academic stress level. The reason for this stress may come from nursing students experience worrying about their grades, Fear from examination, too much responsibilities and failing in course and also may stressed from their relationships with parents and Other personal problems.

These findings was in agreement with the result of the previous studies of **Hashem et al.** <sup>(43)</sup>, **Manansingh et al.** <sup>(44)</sup>, **Ayaz-Alkaya and Simones** <sup>(45)</sup>, and **Alanazi et al.** <sup>(46)</sup>. They found that there is no statistically significant relation between socio-demographic characteristics and academic stress levels of the nursing students. Along with **Kabir et al.** <sup>(47)</sup> who found that age was not associated with perceived academic stress.

On the contrary, these findings disagreed with **Admi et al.** <sup>(48)</sup> who found that Year of study and gender were the most significant predictors of nursing students' stress, Along with, **Aslan and Akturk** <sup>(49)</sup> who found significance relationship between academic stress and personal characteristic of nursing students As well as, **Masha'al et al.** <sup>(50)</sup>.

#### **As regard The Correlation between time management skills and academic stress scores:**

The current study finding indicated that there is no statistically significant correlation between time management skills and academic stress scores of nursing students.

This might be due to other factors causing academic stress such as study habits and exams, sleep and living conditions, factors related to attitude, and factors related to class. The finding was consistent with the result of the study of **Onieva-Zafra** <sup>(35)</sup> who found that there is no statistically significant correlation between time management skills and academic stress of nursing students. While this finding contradicted with the study conducted by **El-said et al.** <sup>(51)</sup> who found that there was a positive correlation between time management skills and academic stress of nursing students. Also, **Gallardo-Lolandes et al.** <sup>(52)</sup> who found that there was a relationship between time management skills and academic stress of nursing students.

#### **Conclusion:**

In the light of the main study findings; it could be concluded that the highest percentage of nursing students had a low level of time management skills and a high level of academic stress.

#### **Recommendations:**

In view of the main results of the study the following recommendations were derived and suggested;

- Training and education programs must be a continuous process for refreshing and increasing nursing student's knowledge and skills about the concept of time management as well as to emphasize strategies of managing time.
- Design and implement a stress management program for nursing students that emphasize stress coping mechanism.

Table 1: personal characteristics of nursing students (n= 369)

Personal characteristics	Number	Percent
<b>Age per years</b>		
17-19	88	23.8%
19-21	214	58%
>21	67	18.2%
<b>Academic grade</b>		
First	88	23.8%
Second	97	26.3%
Third	117	31.7%
Fourth	67	18.2%
<b>Gender</b>		
Males	88	23.8%
Females	281	76.2%
<b>Previous education before entering college</b>		
Technical institute of nursing	60	16.3%
Technical institute of health	19	5.1%
Secondary school	290	78.6%
<b>The reason for the student joining the faculty</b>		
Desire of the student	120	32.5%
Total score in secondary school	249	67.5%

Table (2): Frequency distribution of nursing students at Zagazig University according to total levels of time management skills (n=369)

Levels of time management skills	No	%
High	29	7.9%
Moderate	50	13.5%
Low	290	78.6%

Table (3): Frequency distribution of nursing students at Zagazig University according to total levels of academic stress (n=369)

Academic stress level	N	%
High	300	81.4%
Moderate	49	13.2%
Low	20	5.4%

Table (4): Relation between time management skills level and personal characteristics of nursing students (n=369)

Personal characteristics of students	Time management skills levels						number	$\chi^2$	P
	High		Moderate		Low				
	n.	%	n.	%	n.	%			
<b>Age per years</b>									
17<19	68	77.3%	20	22.7%	-	-	88	5.67	0.56
19-21	190	88.8%	24	11.2%	-	-	214		
>21	17	25.4%	50	74.6%	-	-	67		
<b>Academic grade</b>									
First	68	77.3%			20	22.7%	88		
Second	76	19.6%	20	6.2%	10	10.3%	97	12.22	0.001*
Third	67	57.3%	50	42.7%			117		
Fourth	20	29.9%	17	25.3%	30	44.8%	67		
<b>Gender</b>									
Males	20	22.7%	58	65.9%	10	11.4%	88	4.22	0.43
Females	50	17.8%	220	78.3%	11	3.9%	281		
<b>Previous education before entering college</b>									
Technical institute of nursing	10	16.7%	45	75%	5	8.3%	60	0.703	0.63
Technical institute of health	10	52.6%	9	47.4%			19		
Secondary school	70	24.1%	200	69%	20	6.9%	290		
<b>The reason for the student joining the college</b>									
Desire of the student	20	16.7%	100	83.3%			120	4.2	0.54
Total score in secondary school	29	11.7%	210	84.3%	10	4%	249		

$\chi^2$  Chi-square test \*significant  $p < 0.05$

Table (5): Relation between academic stress level and personal characteristics of nursing students (n=369)

Personal and academic characteristics	Academic stress levels						number	$\chi^2$	P
	High		Moderate		Low				
	n.	%	n.	%	n.	%			
<b>Age per years</b>									
17<19	80	90.9%	8	9.1%			88	4.75	0.67
19-21	200	93.5%	14	6.5%			214		
>21	57	85.1%	10	14.9%			67		
<b>Academic grade</b>									
First	80	90.9%	8	9.1%			88	5.32	0.58
Second	87	89.7%	10	10.3%			97		
Third	100	85.5%	10	8.5%	7	6%	117		
Fourth	50	74.6%	10	14.9%	7	10.5%	67		
<b>Gender</b>									
Males	60	68.2%	20	22.7%	8	9.1%	88	0.901	0.82
Females	260	92.5%	11	3.9%	10	3.6%	281		
<b>Previous education before entering college</b>									
Technical institute of nursing	50	83.4%	5	8.3%	5	8.3%	60		
Technical institute of health	19	100%					19	6.2	0.85
Secondary school	250	86.3%	30	10.3%	10	3.4%	290		
<b>The reason for the student joining the college</b>								3.4	0.61
Desire of the student	100	83.3%	15	12.5%	5	4.2%	120		
Total score in secondary school	210	84.4%	29	11.6%	10	4%	249		

$\chi^2$  Chi square test \*significant  $p < 0.05$  \*\* highly significant  $p < 0.001$

Table (6): Correlation between time management skills and academic stress scores (n=369)

Items	Academic stress score	
	R	P
Time management skills scores	0.042	0.223

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