

# Impact of Time Management Program on Time Wasters of Head Nurses and Their Perception toward Effective Organizational Performance

Ahlam Mahmoud El-Shaer

Nursing Administration, Faculty of Nursing, Mansoura University.Egypt

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**Abstract:** Time management is a set of skills and behaviours that become a part of one's personal and professional life. It is the key to high performance levels and affecting not only the productivity of your employees, but also helps to cope pressure more efficiently. The aim of the study is to explore the impact of time management program on time wasters of head nurses and their perception toward effective organizational performance. Quasi-experimental design was used in this study. All head nurses (n= 40) working in outpatient of health insurance at Dakahlia were included in the study. Three tools were used for data collection, namely time management questionnaire, time management for effective organizational performance questionnaire, and knowledge Test. A major finding of the study were highly statistical significant improvement of knowledge level of head nurses', current use of time management, time wasters and perception toward effective organizational performance post program. Statistical significant positive correlation were found post program at  $P < 0.05$  between head nurses level of knowledge, current use of time management and their perception of effective organizational performance. While negative correlation was found pre and post program with head nurses age and experience. It is recommended that time management training programs must be provided to nursing staff in varies level at different health setting and organizational records should be standardized formats to save time.

**Keywords:** organizational performance, time management, time wasters, training program.

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## I. Introduction

Changing work environment such as health care organization with huge activities where nurses are carrying a lot of responsibilities, make it imperative to manage time to achieve these activities [1]. Time is the stuff of which life is made. It is a finite, valuable and the most perishable of all resources because it cannot be stored or recovered. Once a minute has passed, it is gone forever. So the effective use of time becomes more necessary to enable head nurses to meet personal and professional goals, gain control over work and promote quality [2]. Time management is a set of principles, practices, skills, tools and system that help to use your time to accomplish what you want [3]. Time management is self - management that different for everyone [4].

Time management is the use of personal and professional management tools and strategies to assure that investment in activities leads toward achieving a desired, high- priority goal, enhance effectiveness of organizational performance and increase productivity [5]. It also helps them maintain a healthy work-life balance and keeps them motivated [6]. In other words, it is the art of planning, organizing, scheduling, budgeting and evaluating of when and how long it takes to perform an activity and control their time rather than letting time control them [7].

Today, the aspiration for continuous learning, application of new strategies at work and staff development programs taking into consideration the value and essence of time [8]. Time management program is a great importance to your personal life and career success. It teaches you how to manage your time effectively and make the most of it [9], helps to make conscious choices, so you can spend more of your time doing things that are important and valuable to you. It can help you to reduce wasted time, energy and become more creative, productive, and able to do the right thing at the right time [10].

Time management training is the most essential methods to enhance the productivity of nursing staff, which participants are provided with a unique planning and managements systems that help them have greater control over their time as well as their performance [3]. Time-management training program is concerned by giving insight into time-wasters, changing time expenditure, and increasing workday efficiency by learning head nurses planning their work based on prioritize the activities, and how to manage unexpected tasks. Also, many books and articles were written to convey these and similar ideas to managers, promising them a greater effectiveness while using less time [11].

Developing effective skills for managing your time is essential to treat the conflicting demands of time for study, leisure, earning money and job performing. Time management skills are valuable in job hunting, and in many other aspects of life. These skills including setting clear goals, breaking your goals, and reviewing your

progress towards your goals are covered in planning. Making a time log is the essential tool to identify how is using your time. Start by recording what you are doing. [12]. In addition, estimate time required for doing the routine tasks can help you to become effective planner and determine the time available for other activities [13].

Other skills involved prioritizing - focusing on urgent and important tasks rather than those that are not important or don't move you towards your goals [14, 15]. In prioritizing it is important to make a "to do" list. The list is a planning tool. Although the head nurses may use weekly or monthly list, a list can assist in coordinating daily operations. Rank the items on your "to do" list in order of priority and should be reviewed periodically to see what was not accomplished. List should allow adequate time for each task and allow you to say "no" to activities that do not fit your priorities [2].

Organizing involves ordinary arrangement of all planned activities; this stage of time management has to do with bringing all the required resources together [16]. Organizing the work schedule and get help from others through delegation are tools for time management. Scheduling is not just recording what you have to do, it is also making a time commitment to the things you want to do. Good scheduling requires effective using for time log [14]. Delegation is getting work done through others by transferring responsibility for activities to another without transferring accountability for the activities. It is considered the greatest time saver. Head nurses can delegate routine work; activities for which the head nurse do not have time, tasks that moved down in priority, and problem solving [17].

From the skills of time management are persevering when things are not working out and avoiding procrastination. Procrastination has been defined as the act of needlessly delaying tasks to the point of experiencing subjective discomfort. It involves knowing that one is supposed to complete a task and failing to motivate to accomplish the goal within the desired time frame [18]. To overcome procrastination by dividing the task into smaller segments that need less time commitment and result in specific, realistic deadlines. Also, try to take decisions immediately when possible and when you don't need to gather more information pertinent to the decision [12, 15].

Using time log is a good way to identify areas of wasting time in your life and enabling to reduce these through log every task doing at a week in detail and then reviewed to identify how you use your time. You lose time when switching from one task to another, resulting in a loss of productivity [19, 20]. A time waster is any activity that has fewer benefits and usually prevents head nurse from accomplishing the job or achieving the goal [21]. Time wasters may be external that imposed by other people and things. You can decrease or eliminate time spent in many activities such as organizing your workspace does not need to be overwhelming. Provide yourself with a desk with enough clear space to do your work, the best lighting you can afford, and a comfortable chair [22]. Also, element telephone call time waster through: focused on the reason for the call; don't answer phone! Leave specific message; have a secretary screen calls to immediate and delayed response; stand up while you talk on the phone; keep the conversation brief; determine times of the day for receiving calls and identify the others when you are available [12].

Un expected visitors as time wasters should be managed through establish the times when you are available for visits; visit others; arrange appointment, leave your office, close your door and establish regular meeting time. Also, Meetings are a frequently encountered time waster, which the cost of meetings is high. Holding an effective meeting is one more way to work smarter, not harder. A meeting is an investment in time and money, and is a possible cause of lost productivity in other areas [23]. So, time wasters can be reduced in meeting through: identify in advance the purpose of the meeting; arrive on time; start the meeting and ending on time; request agenda and stick to it [17].

Manage internal time wasters by keeping yourself healthy, scheduling time to relax, or do nothing, help to perform tasks more quickly and easily. Determine biological clock to identify times of optimal level of energy and concentration and learn to manage time accordingly using scheduling priority tasks. Poor time management can result in fatigue, stress, bad mood, and may be exposed for illness [12].

Effective using the time help nurses to become more productive, more satisfaction, less pressured, able to do the things they want, behave positively to others, and feel better about themselves [6]. Good time management will increase productive, creative, effective costly and time which result to optimal performance. The need for time management become very important not only as a motivating for employees' performance and productivity on job, but as the bases for the overall performance of the organization [1].

Organizational performance defined as the achievement of organizational goals in pursuit of business strategies that lead to sustainable competitive advantages [24]. It involves the recurring activities to establish organizational goals, monitor progress toward the goals, and make adjustments to achieve those goals more effectively and efficiently [25]. Organizational performance is one of the most important factors that most of organization should consider to focus in which contribute to place of an organization in relation to its competitors with others [26]. High performing organizations that provide effective and continuous services such as nursing services should be have effective time management strategies and nurses having high awareness for importance of applying these strategies to improve their performance [27, 28].

Consistent ability to produce results over prolonged period of time and in a variety of assignments means organizational performance [29]. Performance can be seen as the financial costs, efficiency (the relationship between achieving objectives and consumption of resources, such as time) and effectiveness (is achieving objectives and excellence of care) [29]. Obtaining high organizational performance; controlling the financial future of any organization and improving their productivity can be achieved by using effective time management [28].

### **Significance of the study**

The success or failure of any organization are measured by effective time management and control for wasting time which time is related to each activity of the organization. Outpatient health insurance provides comprehensive, multiple services and dealing daily with huge number from different types of clients. Also, head nurses working in outpatient observed that they spend their times in receiving visitors, socializing with other nurses, or accompanying family and relatives to be examined by physicians, which causes great deal of time wasters and poor time management. So time management skills are the most useful skills need to learn to head nurses of outpatient to help them to excel in their jobs and keep up good balance. As well as, enable them to overcome wasting time and raised awareness of the importance of effective time management to improve performance and increase productivity.

### **Research hypothesis**

**H1:** Time management program can enhance current use of time management behaviour.

**H2:** Time management program can reduce time wasters of head nurses.

**H3:** Time management program can improve perception toward effective organization performance.

### **Aim of the study**

- To assess current use of time management behaviours' by head nurses.
- To evaluate time wasters of head nurses.
- To assess head nurses perception toward effective organizational performance
- To explore the impact of time management program on time wasters of head nurses and their perception toward effective organizational performance.

## **II. Subject And Methods**

**2.1 Design:** The study was used quasi-experimental design.

**2.2 Setting:** The study conducted at all out patient (33) of health insurance at Dakahlia

**2.3 Subjects:** The total number of head nurses included in this study was 40 head nurses.

**2.4 Tools of data collection:** The data will be collected by using three tools:-

**2.4.1 Tool I.** Time management questionnaire. It was modified by the researcher based on Time Management Behavior Scale (TMBS) by **Macan et al., [30]**, Time Management Questionnaire (TMQ) by **Britton & Tesser, [31]** and **Lang, [32]**.

It included three parts:

- a) Socio Demographic data for information regarding head nurses include: name, age, education, marital state and years of experience.
- b) Current use of time management subscales to assess time management behaviors used by head nurses. It include 71 items grouped under 6 subscale namely; goal setting (11), prioritization (7), managing interruption ( 7 items for telephone interruption, 6 items for unexpected visits and 10 items for meeting), procrastination (8 items), scheduling (10 items ) and delegation (12 items).
- c) Time wasters subscale ( 49 items) to assess time wasters affecting Head nurses in different areas of planning (6 items) , organizing (5 items), staffing (8 items ), directing (10 items ), controlling (6 items), communication ( 9 items) and decision making ( 5 items ).

The response for questionnaire was measured by 3 point scale, 1 = Never and rarely done, 2 = Often done, 3 = usually done

**2.4.2 Tool 2. Time management for effective organizational performance questionnaire:** It was used to measure perception of head nurses toward importance of time management for effective organizational performance. It was modified by the researcher based on **Adeyinka[3]** and **Njagi & Malel[33]**. It included 22 items and head nurses responded using a 5-point Likert scale ranged from 1= strongly disagree to 5= strongly agree.

### **2.4.3 Tool 3. Knowledge Test**

It was developed by the researcher based on literatures, to assess knowledge of head nurses about time management and time wasters. The total scores for knowledge test were 35 score. Each correct answer takes one point and 0 for wrong answer. High knowledge scores (<85-75), moderate knowledge (>75-60), and low (>60). High and moderate scoring means head nurses have adequate knowledge, and low scoring means they have inadequate knowledge

## **2.5 Methods**

- Official permission to conduct the study was obtained from administrator of training department of health insurance and manger of out-patients.
- Head nurses oral consent was taken before the beginning and had the right to withdraw from the research at any time.
- Tools of data collection were translated to Arabic and tested for its content validity and relevance by a jury consisted of 5 experts; 2 experts in obstetric department, one in community nursing department and 2 in nursing administration department.
- The internal consistency reliability of time management questionnaire was assessed by using coefficient alpha and it was 0.91. Also, the internal consistency reliability of time management for effective organizational performance questionnaire was assessed by using coefficient alpha and it was 0.84.
- A pilot study was carried out on 5 head nurses working in Mansoura university hospital to evaluate the clarity and applicability of the tools and necessary modifications were done based on their responses. These head nurses are not included in the study. Time needed to answer the questionnaire was 20-30 minutes.
- The data was collected by the researcher and tool I & II was distributed to head nurses' pre and after three months of the program to assess skills used to manage your time, time wasters and perception of head nurses toward importance of time management for effective organizational performance.
- The knowledge test was distributed to the head nurses pre, immediately post program and after three months to assess head nurses background, knowledge acquisition and retention about time management skills and time wasters.
- An educational program for head nurses about time management and time wasters was developed and implemented by the researcher.
- Duration of data collection lasted 8 months beginning from April 2014 till November 2014. The assessment phase initiated at the beginning of April 2014 and followed by period of preparation of the program. Implementation of the program started from August 2014 and finished in the same month. Follow up phase started from September 2014 till the end of November 2014.

## **2.6 Statistical analysis:**

The collected data were organized, tabulated and statistically analyzed using SPSS software (Statistical Package for the Social Sciences, version 16, SPSS Inc. Chicago, IL, USA). For quantitative data, the range, mean and standard deviation were calculated. For qualitative data, comparison between two groups and more was done using Chi-square test ( $\chi^2$ ). For comparison between means of two related groups (pre& post program) of parametric data, paired t-test was used. For comparison between more than two means of parametric data, F value of ANOVA test was calculated for parametric data, where scheffe test was performed to compare between each two means if F value was significant. Pearson Correlation between variables was evaluated using Pearson's correlation coefficient (r). Significance was adopted at  $p < 0.05$  for interpretation of results of tests of significance.

## **2.7 Educational program for time management**

### **2.7.1 Objective of the program**

The main objective of the program is to improve knowledge and skills of head nurses about time management and how to manage time wasters, a liew sas improve head nurse perception toward importance of time management for effective organizational performance.

### **2.7.2 Selection and Organization of content**

The content was selected after careful study analysis of data collected from head nurses about their knowledge on time and strategies used to manage it. The use of simple scientific and professional language was considered to ensure that the head nurses knowledge will be improved.

### **2.7.3 Contents**

Program will include topics of:

- Basic concepts of time management contains items on definitions, myths about time, benefits, types and styles of time management.
- Time wasters contains items on common time wasters facing head nurses at planning, organizing, staffing, directing, controlling, communication and decision making.
- Time management strategies contains items on time analysis, setting goal, priorities, planning, scheduling, delegation, avoid procrastination and manage time wasters.

#### **2.7.4 Methods of teaching**

Selection of teaching methods was governed by consideration for characteristics of the subject themselves and contents of the program. The methods used in teaching the program included lecture, situation from real life and group discussion.

#### **2.7.5. Teaching aids**

The teaching aids used in the program were simply handouts and power point.

#### **2.7.6 Implementation of the program**

##### **2.7.6.1 Settings**

The program was conducted in the classroom at outpatient of health insurance in Mansoura.

##### **2.7.6.2 Participants**

A sample of (40) head nurses working in all outpatient of health insurance at Dakahlui

##### **2.7.6.3 Time**

The time for program was amounted to (8) hours. Divided into four sessions at two days, every day had two sessions and duration of every session was two hours.

### **III. Result**

"Table 1" Show personal characteristics of studied head nurses. Age of studied head nurses ranged from (30-56) old years with mean scores (38.62± 6.53). Most of them 95% were married and more than half having diploma and 45% having bachelor degree. Experience of them ranged from (8-36) years with mean scores (17.80± 7.20).

"Fig 1" represents opinions of head nurses about time management pre and post 3 months of program. It was observed that current use of time management behaviors' improved with the program (25% never or rarely done, 35% often done & 40% usually done preprogram against, 8%, 13% & 80% respectively post program). Also time wasters of head nurses were decreased post program (68% never or rarely done, 20% often done & 13% usually done) than preprogram (50%, 28% & 23%) respectively.

"Table 2 & Fig. 2": represents mean scores of head nurses about time management subscales and perception of effective performance in their organizations pre and post 3 months program intervention. There was highly statistical significant improvement of current use of all time management behaviors post program and time wasters were decreased except planning and staffing time wasters. Also, there was highly statistical significant improvement of head nurses perception toward effective performance in their organizations. As regard the total mean scores of current use of time management behaviors, time wasters and perception of effective performance preprogram were (156.5±19.52, 84.27± 19.26 & 85.25±9.34) and post program were (197.17± 17.10, 71.02±12.78 & 93.50± 8.35) respectively.

"Table 3" Show Perception of studied head nurses about effective organizational performance pre & three months post program. There were statistical significant differences pre & three months post program (improvement) in mostly items of effective organizational performance, and other items were improved but not statistical significant except two items were organization practice effective time management and effective time management have negative effect on productivity

"Table 4 & Fig. 3": show that mean scores of head nurses knowledge about time management pre, immediate and post 3 months program intervention. There was statistical significant improvement of head nurses knowledge about time management immediate and three months post program than preprogram, with mean score (25.95 ± 4.01, 25.92 ± 3.56) respectively against (21.52 ± 3.51) preprogram. While there was no change in level of knowledge immediate and three months post program.

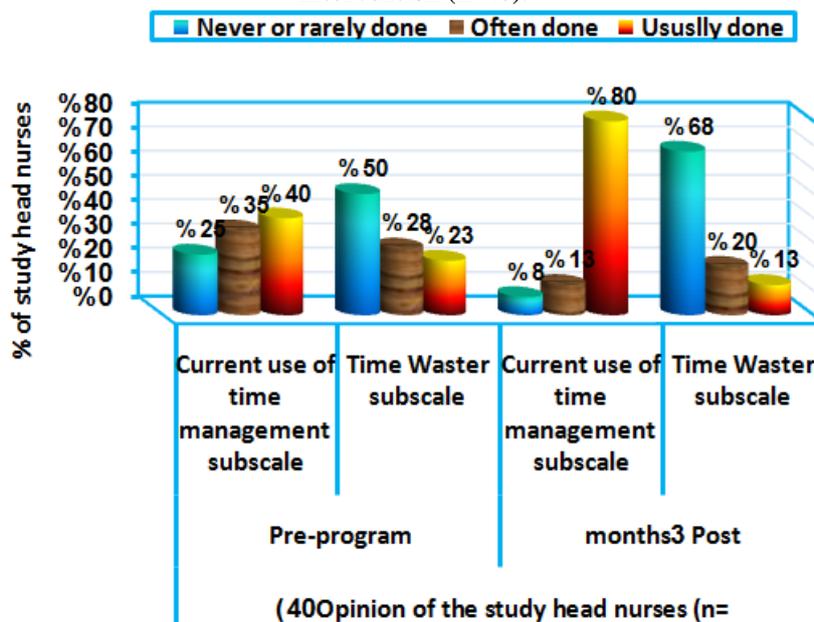
"Table 5": Correlation between knowledge scores of the study head nurses and their scores about time management and perception of effective performance in organization, age and experience pre & post program intervention. Table revealed that statistical significant negative correlation pre and post program between level of head nurses knowledge, with age and experience, at p<0.05. Moreover, current use of time management behavior, time wasters and perception of effective performance showed negative correlation pre and post

program with head nurses age and experience. There were reverse relation between head nurses' knowledge, current use of time management behavior, time wasters and perception of effective performance with head nurses age and experience. Adding that post program, there were statistical significant positive correlation at  $p < 0.05$  between head nurses level of knowledge with current use of time management behavior, and perception of effective performance.

"Table 1": Personal Characteristics of studied head nurses (n=40).

Variables	The studied head nurses (n=40)	
	n	%
<b>Age (years):</b>		
Range	30-56	
Mean±SD	38.62±6.53	
<b>Marital status:</b>		
Married	38	95.0
Widow	2	5.0
<b>Qualification:</b>		
Bachelor	18	45.0
Diploma	21	52.5
Technician	1	2.5
<b>Years of experience in nursing:</b>		
Range	8-36	
Mean±SD	17.80±7.20	

"Fig 1": Opinions of head nurses about time management subscales pre and post 3 months of program intervention (n=40).



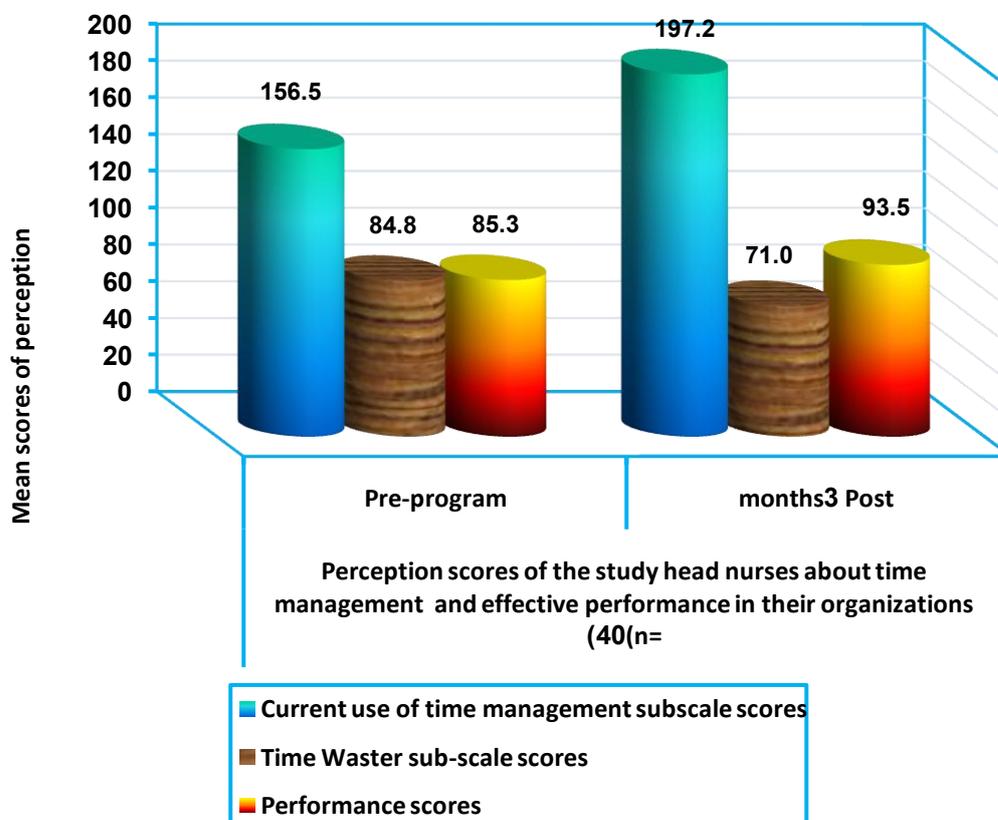
"Table 2": Mean scores of head nurses about time management subscales and perception of effective performance in their organizations pre and post 3 months program intervention (n=40).

Variables	Mean scores of head nurses (n=40)			
	Pre-program	Post 3 month- program	Paired t-test	P
	Range Mean±SD	Range Mean±SD		
<b>Time management subscales:</b>				
<b>A-Current use of time management subscale items:</b>				
1-Goal setting	11-32 24.37±4.38	22-33 30.90±2.67	8.042	0.0001*
2-Prioritization	12-19 15.67±2.02	12-21 18.75±2.51	6.040	0.0001*
<b>3-Managing Interruption</b>				
a-Telephone interruption	8-18 12.37±2.64	8-21 17.30±4.61	5.860	0.0001*

<b>b-Unexpected visitor</b>	6-16 11.40±3.02	6-18 15.22±3.20	5.500	0.0001*
<b>c-Meeting</b>	10-30 24.85±4.77	20-30 29.40±1.81	5.642	0.0001*
<b>4-Procrastination</b>	12-22 18.02±2.70	18-24 21.65±1.97	6.856	0.0001*
<b>5-Scheduling</b>	15-27 21.42±3.46	16-30 28.65±3.32	9.529	0.0001*
<b>6-Delegation</b>	12-36 28.35±6.39	31-36 35.30±6.734	6.734	0.0001*
<b>Total</b>	<b>94-179</b> <b>156.47±19.52</b>	<b>154-213</b> <b>197.17±17.10</b>	<b>9.920</b>	<b>0.0001*</b>
<b>B-Time Waster Sub-scale items</b>				
<b>1- Planning time wasters</b>	6-18 10.10±3.21	6-18 9.00±2.88	1.613	0.111
<b>2-Organizing time wasters</b>	5-15 10.05±2.73	5-15 8.27±3.33	2.609	0.011*
<b>3-Staffing time wasters</b>	8-24 11.60±4.28	8-24 11.60±4.28	0.000	1.000
<b>4-Directing time wasters</b>	10-30 18.75±5.18	10-26 14.90±2.96	4.083	0.0001*
<b>5-Controlling time wasters</b>	6-18 11.52±3.74	6-14 9.60±2.66	3.191	0.002*
<b>6-Communication time wasters</b>	9-27 14.80±4.44	9-19 11.80±2.84	3.598	0.001*
<b>7-Decision making time wasters</b>	5-15 7.45±3.19	5-9 5.85±1.10	2.996	0.004*
<b>Total</b>	<b>57-127</b> <b>84.27±19.26</b>	<b>51-105</b> <b>71.02±12.78</b>	<b>3.625</b>	<b>0.001*</b>
<b>•perception of effective performance in organizations</b>	<b>54-102</b> <b>85.25±9.34</b>	<b>72-106</b> <b>93.50±8.35</b>	<b>4.165</b>	<b>0.0001*</b>

\*Significant (P<0.05)

"Fig. 2": Mean scores of head nurses about time management subscales and perception of effective performance in their organizations pre and post 3 months program intervention (n=40).



**Table (3): Perception of studied head nurses about effective organizational performance pre & three months post program (n=40).**

Effective organizational performance items	Opinion of the study head nurses (n=40)										χ <sup>2</sup> P
	Pre-program					Three months post-program					
	Strongly disagree	Disagree	Un decided	Agree	Strongly agree	Strongly disagree	Disagree	Un decided	Agree	Strongly agree	
n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	
1-Think you need effective time management in your organization	0	0	1	21	18	0	0	0	6	34	14.256
	0	0	2.5	52.5	45.0	0	0	0	15.0	85.0	0.001*
2-Your organization practice effective time management	1	6	16	9	8	4	7	11	14	4	5.223
	2.5	15.0	40.0	22.5	20.0	10.0	17.5	27.5	35.0	10.0	0.265
3-Has effective time management been helpful in the achievement of your set goals?	0	3	1	15	21	0	0	1	13	26	3.675
	0	7.5	2.5	37.5	52.5	0	0	2.5	32.5	65.0	0.299
4-Agree that effective time management improves output	0	0	12	11	17	0	0	1	3	36	20.690
	0	0	30.0	27.5	42.5	0	0	2.5	7.5	90.0	0.0001*
5-Agree that the type of objectives set in your company determines the height of organizational performance	0	5	7	12	16	0	0	4	13	23	7.115
	0	12.5	17.5	30.0	40.0	0	0	10.0	32.5	57.5	0.068
6- Is your organization performance susceptible to or affected by poor time management?	3	11	3	15	8	4	4	10	8	14	10.946
	7.5	27.5	7.5	37.5	20.0	10.0	10.0	25.0	20.0	35.0	0.027*
7-Agree that when inefficient staffs are retrenched faults are minimized and performance will improve	0	2	3	13	22	0	2	1	11	26	1.500
	0	5.0	7.5	32.5	55.0	0	5.0	2.5	27.5	65.0	0.682
8-Think that effective time management will increase your organization's performance	1	1	2	10	26	2	0	0	7	31	4.301
	2.5	2.5	5.0	25.0	65.0	5.0	0	0	17.5	77.5	0.367
9- Does the management of your company hold seminars on time management?	6	14	12	6	2	4	11	3	8	14	15.45
	15.0	35.0	30.0	15.0	5.0	10.0	27.5	7.5	20.0	35.0	0.004*
10-Has some workers been laid off because of poor time management?	6	13	8	8	5	4	7	2	8	19	13.97
	15.0	32.5	20.0	20.0	12.5	10.0	17.5	5.0	20.0	47.5	0.007*
12-Has time management being helpful in your personal life?	0	0	0	13	27	0	0	0	5	35	4.588
	0	0	0	32.5	67.5	0	0	0	12.5	87.5	0.032*
13-Are you really in support of effective time management in your organization?	2	2	4	22	10	2	0	4	8	26	15.64
	5.0	5.0	10.0	55.0	25.0	5.0	0	10.0	20.0	65.0	0.004*
14-Can effective time management have negative effect on productivity?	24	7	2	3	4	22	6	7	5	0	7.442
	60.0	17.5	5.0	7.5	10.0	55.0	15.0	17.5	12.5	0	0.114
15-Do you think lack of time management is one of the problems affecting Egypt today?	5	0	1	11	23	1	0	1	6	32	5.610
	12.5	0	2.5	27.5	57.5	2.5	0	2.5	15.0	50.0	0.132
16-Can avoiding problem people (troublesome people) help in managing your time?	4	6	1	9	20	0	1	0	11	28	10.11
	10.0	15.0	2.5	22.5	50.0	0	2.5	0	27.5	70.0	0.039*
17-Is procrastination a time waster?	2	7	1	14	16	2	1	1	4	32	15.39
	5.0	17.5	2.5	35.0	40.0	5.0	2.5	2.5	10.0	80.0	0.004*
18-Can making a daily list of your activities helps to manage your time?	0	3	5	12	20	2	0	0	8	30	12.80
	0	7.5	12.5	30.0	50.0	5.0	0	0	20.0	75.0	0.012*
19-Are there penalties for poor time management in your organization?	1	7	11	16	5	9	1	8	11	11	14.55
	2.5	17.5	27.5	40.0	12.5	22.5	2.5	20.0	27.5	27.5	0.006*
20-Planning is key in effective time management?	0	3	8	17	12	2	0	0	11	27	20.05
	0	7.5	20.0	42.5	30.0	5.0	0	0	27.5	67.5	0.0001*
21-Is time management the only determinant for	1	4	10	13	12	0	7	1	8	24	14.37

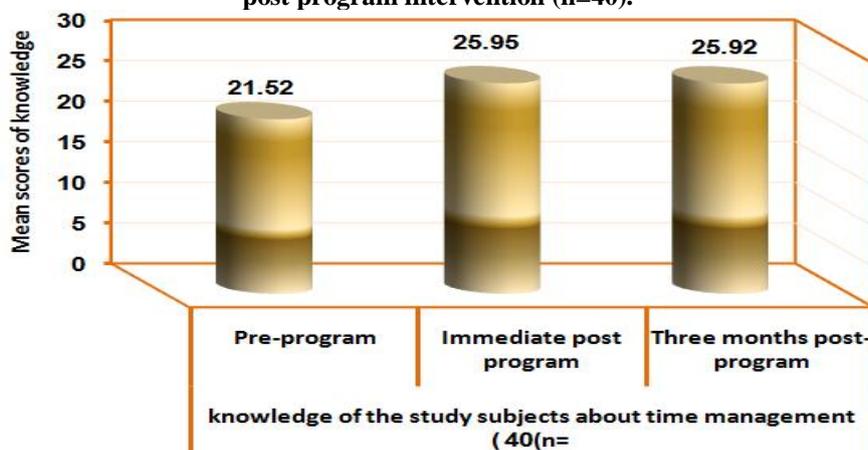
\*Significant (P<0.05)

**"Table 4": Mean scores of head nurses knowledge about time management pre, immediate and post 3 months program intervention (n=40).**

Knowledge scores	Knowledge of the study head nurses(n=40)		
	Pre-program (I)	immediate post-program (II)	Three months post program(III)
Range	13-29	17-31	18-32
Mean±SD	21.52±3.51	25.95±4.01	25.92±3.56
F-value	18.952		
P	0.0001*		
Scheffe test	I vs II, P=0.0001* I vs III, P=0.0001* II vs III, P=1.000		

\*Significant (P<0.05)

**Figure (3): Mean scores of head nurses knowledge about time management pre, immediate and 3 months post program intervention (n=40).**



**"Table 5": Correlation between knowledge scores of the study head nurses and their perception about time management and effective performance in organization, age and experience pre & post program intervention (n=40).**

Variables	The study head nurses pre & post program (n=40)							
	knowledge scores		Current time management subscale		Time Waster Sub-scale		Effective performance	
	pre	post	pre	post	pre	post	pre	post
	r P	r P	r P	r P	r P	r P	r P	r P
▪ Current use of time management subscale	0.067 0.682	0.735 0.0001*						
▪ Time waster subscale	-0.143 0.380	-0.015 0.924	-0.249 0.122	-0.151 0.352				
▪ Perception scores about effective performance	0.289 0.071	0.468 0.002*	0.044 0.786	0.446 0.004*	0.114 0.482	0.132 0.417		
▪ Age in years	-0.450 0.004*	-0.447 0.004*	-0.103 0.520	-0.197 0.222	-0.205 0.204	-0.171 0.291	-0.195 0.229	-0.433 0.005*
▪ Experience years	-0.563 0.0001*	-0.485 0.002*	-0.239 0.137	-0.277 0.084	-0.183 0.258	-0.175 0.281	-0.215 0.182	-0.523 0.001*

\*Significant (P<0.05)

#### IV. Discussion

Time is money: valuable and limited so, it must be used wisely, budgeted and protected.[12]. Time is an asset to all human beings as well as to any organization especially health care organization, which today is obliged to deal with the issue of time management effectively and without fail. Time is a prestigious commodity. It is a worth resource and if our health organization can manage it well it will certainly lead to a fruitful success and effective performance [34]. Because of the important role of time management in today's organizations and because of the positive consequences of performance for organizations [35], so, studying the impact of time management program on time wasters of head nurses and their perception toward effective organizational performance seems to be useful for researcher.

Current result indicated that, there were statistical significant positive correlation post program between head nurses level of knowledge, current use of time management and their perception of effective organizational performance. This result means improving level of head nurses knowledge after program lead to increase current use of time management behaviors and improve their perception to effective organizational performance. Consistence with this result the research findings of Ahmed et, al. [36] show that, the nurses' job performance in the organization were affected by their time management in completing the tasks during an event. Furthermore, there was a significant relationship between time management and job performance. Also, Claessens[11] concluded those with formal training programs aimed to identify and develop skilled workers, are consistently achieved high rates of organizational performance.

In this respect Hall &Hirsch, King et al., and Orpen[37-38-39]found that positive relation between time management training and performance, which the popularity of time management is justified in as far as it has some favorable effects on people's perceptions and feelings to word effective organizational performance. A greater reason to use time management skills is that it increases productivity and employee performance. Which the higher focus on timelines enforces head nurses to find more efficient ways to complete tasks. Also head nurses who have a hard time will seek help sooner instead of later to complete their tasks, this in turn affects positively on organizational performance SBI [40].

In addition, Findings of Adebisi[1] revealed that there is significant and positive relationship between time management practices and organizational performance. There is also a strong relationship between Job performance and time management tactics and strategies in study conducted by Njagi & Malel[33].

Regarding current use of time management behavior Green & Skinner and Van Eerde[41-42] concluded that participants in there study did use the time management behavior more frequently after a time management training program. In this respect Water Worth[43] added that time management is more problematic than most of managerial skills, because it is based on performance standards and individualized competency in organizing work. Again, Cherry & Jacob[21] mentioned that learning to manage time is a problem for many head nurses due to they do not try to use it, which leads to lack of self-management and in under use of the head nurses of the available time.

Whereas in two other studies Macan, and Slaven & Totterdell, [44-45] this relation was not found. Although Macan's study time management behaviors did not increase after the training program compared to a control group, the participants did report more feeling of control of time after they had participated in a time management program.

The result adding that negative correlation were found pre and post program between head nurses age and experience with their level of knowledge, current use of time management behaviors, time wasters and their perception toward effective organizational performance. This means, there were reverse relation between head nurses level of knowledge, current use of time management behaviors, time wasters and their perception toward effective organizational performance to head nurses age and experience. Such findings were not expected because nursing skills and knowledge must be increased with nurses' age and experience in nursing. Additionally nurses become more competent in time management, have background information and enthusiasm that make them tolerate responsibility, managing time wasters and in return they will be more perceived about effective organizational performance.

Mohamed [46] agrees with the previous result and revealed that no significant relation between head nurses years of experience with time management and delegation. Also, Blegeen et al. [47] deduced that there is inconsistent relationship between length of nurses' professional experience and their abilities in utilization of time through delegation of some responsibilities of their own to the subordinates.

On the other hand, Marrison[48] opposed the result and found that as age increases, nurses perceive more opportunities to gain more managerial skills to have access to challenging work. And, Kovner&Schore[49] added that as years of nursing experience increases, head nurses become more competent with their work due to better time utilization or management, and better oriented with delegation of some of their duties to their staff nurses. In this respect, Marques & Huston [2] concluded that increase the experience of the head nurses help them to use time estimation to organize their work within time constrains, especially with external time wasters as in overload paper work.

Regarding opinions of head nurses about time management subscales pre and post 3 months of program, the research findings show that, the majority of head nurses (93%) were often and usually use time management behaviors post program against (75%) preprogram. This result means that training program helps head nurses to improve their skills in managing their time through setting long and short goals with smart characteristics; putting priorities and learn to differentiate between important and urgent activities; identify how to manage different interruption such as telephone, unexpected visitors and meeting interruption; learn how to overcome procrastination; encourage head nurses to delegate routine tasks and using time tools such as time log and scheduling.

The review demonstrates that time management behaviors relate positively to perceived control of time, job satisfaction and health. Time management training seems to enhance time management skills Adebisi[1]. In line with this finding Mohamed[46] was the opinion that the majority of head nurses at Mansoura University Hospitals sometimes use time management skills, but, they need more training. Which head nurses have little knowledge about time management, its benefits, and its methods, besides they did not have any training related to the concept of self-management of their time. In this respect Water Worth [43] claimed that orienting head nurses to manage time for their activities is an acceptable way to improve efficiency and productivity of nursing care.

Covey [50] clearly concluded that: to be efficient head nurses must have efficient time management skills. Nurses who routinely use time management skills are the active achievers in all path of life and well help one to function effectively, even under pressure. Also, Adebisi[1] recommend that managers at all level should realize the custom of time management practices as a means to outperform contest. Activities should be prioritized in order of urgent and important, procrastination should be avoided because it is the most time killer. Managers should also ensure that everyone in the organization is trained on effective practice of time management skills to ensure the extensive performance of the organization.

Time waster is something that prevents a person from accomplishing the job or achieving goals. The result of present study revealed that mostly of head nurses (68%) were never or rarely having time wasters post program in relation to (50%) of head nurses preprogram. Because head nurses post program identify how to overcome time wasters result from procrastination; ambiguous purpose and unable to set priorities; disorganized work area and reach difficulty to things you need for work; fail to guide group goal and unable to manage conflict in your unit; unable to say "No" and make a lot of telephone call during work; fail to disperse communication to other, lack of feedback, lack of information; and unable or delay in taking decision.

The results were in agreement with Mohamed [46] who recommended that Staff development programs must be provided to head nurses with emphasis on time management and practical strategies for saving time and overcome time wasters, which almost half of the head nurses in their study have time wasters. These common time wasters were due to poor planning, failure to set objectives, procrastination, ineffective meeting, socializing, telephone interruptions, lack of information, poor communication, lack of feedback, lack of adequately described policies and procedures, incompetent coworkers, inability to delegate, inability to say no, and sometimes paper work.

Also, Saylor [51] who mentioned that turbulence in the internal environment, inability to delegate, and misunderstanding affect the head nurses' using time which prevent the nursing business from reaching its full

potential. The study furthermore revealed that highly statistical significant improvement of current use of time management post program. Which head nurses skills post program improved in setting goals, determine priorities, managing interruptions, overcome procrastination, making scheduling and using delegation. On the other hand, head nurses after the program learned to manage and decrease time wasters result from, organizing through left work area organized and take one task at one time; directing through, improve coordination between staff, manage conflict, exclude yourself from routine details and delegate authority commensurate with responsibility. Additional to decreased time wasters due to controlling by say no for additional responsibility, decrease telephone call during your shift, look poor performance and provide suitable supervision on staff. Also improving communication and decision making to reduce waste time by share information provide feedback, attend meeting with agenda, having complete and accurate information, acting after thinking and set time limit for decision making.

Consistence with this result Reference of business [52] suggested that, to improve head nurses time management behaviors; they should setting goals, prioritizing tasks, learning skills of delegation, keeping organized and using time log and analyze their time. Ojo[26] added that it is always the duty of head nurses delegate tasks where and when possible and be practiced wisely. The setting of time limits and communicating effectively play a meaningful role to management of times.

In support of these findings, Ahmed et al. [36] infer that training in time management resulted in an increased use of time management behaviors', reduce time wasters, which in turn led to more positive outcomes. In a recent study, Häfner et al. [53] found a positive effect of time management training on perceived control of time and stress. Time management training can help head nurses create better learning habits and strengthen their skills. Moreover, statistical significant improvement were found post program of head nurses perception toward effective organizational performance. Head nurses post program become more knowledgeable about the need for effective time management in their organization, which agree that effective time management improves output, organizational performance affected by poor time management and time management being helpful in your personal life. Also, head nurses become more supportive for effective time management in their organization, more overcome for procrastination, and considered planning as a key in effective time management. In support of these finding, Macan et al., and Barling et al., [30-54] stated that time management has been shown to be related to job performance, group performance and consequently will contribute to the profitability of organizations. Therefore, time management is an important factor in organizations affects employees' activities and performance Janicik&Bartel[55].

According to Satija&Satija[56] Because of global competition and the need for immediate availability of goods and services, time management is becoming an important concept in any organization. Also, Janicik&Bartel[55] found that using time management skills, especially planning behaviors; can also contribute positively to nursing performance. Engaging in effective time management in the work setting improves productivity and helps organization achieving its goals.

In contrary with this result Häfner et al. [53] found that time management training improves the perceived control of time and a decrease in perceived stress whereas it had no impact on different performance indicators. Senécal et al. [18] say in this regard that the relationship with work and academic performance is not clear. Time management training seems to enhance time management skills, but this does not automatically transfer to better performance.

Analysis of the post program results revealed that statistical significant improvement of head nurses knowledge about time management immediate and three months post program with mean score (  $25.95 \pm 4.01$ ,  $25.92 \pm 3.56$ ) respectively against (  $21.52 \pm 3.51$ ) preprogram. The researcher inserts to ensure that the educational aims are met and this finding comes from constructive feedback during the teaching sessions. Moreover, lack of feedback, however allows inappropriate actions to develop into bad habits. This finding is supported by Abd El-Fatah [57] who stated that after implementation of the program overall efficiency of head nurses was significantly moved from the unacceptable to acceptable levels. Roussel et al [58] and EL-Demerdash[59] concluded that education program help head nurses in keeping up to date with new concepts, increasing knowledge and competence, modifying their attitudes and developing their abilities to deal with problems and work with others.

## **V. Conclusion And Recommendation**

In summary, statistical significant positive correlation were found post program between head nurses level of knowledge, current use of time management and their perception of effective organizational performance. While negative correlation with head nurses age and experience was proved. Also highly improvement was found post program at knowledge level of head nurses', current use of time management and ability to deal with time wasters increased. Moreover, perception of head nurses' toward effective organizational performance enhanced.

Based on the results of the present study, the following recommendations are suggested:

- 1- Time management training programs must be provided to nursing staff in varies level at different health setting to improve current use of time management behaviors, perception toward effective organizational performance and decrease time wasters.
- 2- Organizational records should be standardized formats to save time, and should include time management tools such as; time log, schedule, Gantt chart which help staff to manage their time.
- 3- Policies, rules, and regulations should be clear for staff to save time and prevent time wasters.
- 4- Staff at all level should realize the time management practices and used as a habit such as; setting goals, prioritized activities using to do list, delegation and avoid procrastination which manipulated as a means to outperform competition.
- 5- Meetings should be carefully organized through determine in advance purposes, time, place, and attendances which help in saving time as well as prevent time wasters.
- 6- This study should be replicated to certify the positive effects of time management program on control of time, time wasters as well as on job performance.

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