

## The Effectiveness of Time Management Training on the Amount of Nurse's Occupational Stress

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**Abstract:** Managers and professionals work in the field of health and environmental pressure that requires the skills of effective leadership and management. One of these skills is time management. This study aims for determining the impact of time management training on the amount of nurse's occupational stress components. In the current experimental study, one hospital (Heshmat Hospital) was selected throughout 14 hospitals in Rasht by a random sampling of nurses and 97 people were involved in the high-stress group after an initial selection. Then 48 people were selected by simple random sampling, which re-randomized in the two groups named experiment group (24 people) and control group (24 people). The people were initially complete an occupational stress questionnaire (Osipow) and then a six weeks 90-minute time management training session were conducted for experiment group and the questionnaires were completed one month after the re-intervention by both groups. The descriptive statistics (mean, standard deviation) and MANCOVA inferential statistics in SPSS 18 environment were used for data analysis. Results have shown that time management training has been effective in reducing the nurse's occupational stress components and is significant by  $p < 0.003$  and the effect intensity is shown 0.42 by Eta parabola squared which indicates high effect intensity. In conclusion the research findings showed that time management training is effective in reducing nurse's occupational stress. Therefore, it is recommended time management training be involved in nurse's in-service training program.

**Key words:** Time Management %Occupational Stress %Nurses

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### INTRODUCTION

The effective and influential use of the time is an inevitable necessity for getting succeeded in the field of work and living and time management involves a set of skills for controlling and a better use of time. Macenize [1] was the first person introduced the notion of training time management program. He pointed out that training these skills, giving the suitable vision concerning consuming activities, changing the amount of time consumed and prioritizing have positive effects on time management behaviors.

Draker [2] believed that time is one of the scarce resources most people have. In fact, time management is life and personal management. Those who value themselves act carefully in assigning time to their works and think over for what it have been used. The better management someone have on his own time, the better value he assigns to himself and his own life. In addition, managing time and workings and not allowing the matters and occurrences direct someone shows that how a work should be performed more conscious and profitable, not harder and severer.

	Post Test	Dependent Variable	Pre Test	Random Selection
<b>Experiment Group</b>	T2	X	T1	R
<b>Control Group</b>	T2	-	T1	R

Fig. 1: The research project

The ability to planning, giving others the activities, organizing, directing and controlling works are among the skills time management provides someone [3].

According to Golden Her [4], the studies performed on non-immunized behaviors show that occupational stress factors have vital roles in the incidence of non-immune practices from the employed through reducing the concentration, distractions, impairment in memory, dubiety in doing works and decreasing the power to make decisions.

Roberts and Dyer [5] mentioned that there are some needs for professional improvement and pre-services and preparing teaches for coaching that address how and when to manage time and demanding professional activities in its right time.

In addition, Leary [6] figured out, in an experiment conducted on nurse managers, that there is an inverse relationship between time management and occupational stress.

Dorothy [7] conducted an experiment as studying the contrastive effectiveness of time management in preventing pressure resulted from high workload on 11 adults presented in evening classes in the field of business management. The results showed that time management techniques significantly reduce anxiety.

The current work aims for determining the impact of time management training on the amount of nurse's occupational stress components.

### MATERIALS AND METHODS

The current research has been experimentally conducted according to its nature, purpose and hypothesis. This method is used for creating a cause and effect relationship between two variables. The research project is as follows:

The current statistical community includes all the nurses having diploma to doctorate in Rasht. There are 14 hospitals which are working in both publicly and privately. Of 14 hospitals in Rasht, the Heshmat Hospital was selected by cluster sampling. Of the 185 employed nurses at this center, 163 ones participated in initial screening and 22 ones were excluded to participate in this research project (12 ones due to entitled vacation and long-term sickness and 10 ones due to unwillingness). Among these nurses, 97 ones had higher occupational stress than average, in which 48 ones were randomly replaced in a simple sampling in two groups of experiment and control 24 people. A six 90-minute session, once a week experiment was set up for time management training program including setting goals, planning for career goals, setting priorities, planning, scheduling, controlling over time, maintaining discipline and organizing the educational sessions. All the people involved in sampling (control and experiment) replied to the occupational stress pre test in a similar condition before implementing the educational program. The experiment group was then invited to time management sessions and both groups re-completed the time management questionnaires one month after being the educational sessions ended.

**Research Tool:** Osipow's occupational stress questionnaire for collecting and measuring data. This questionnaire includes 5 options (never, sometimes, often, usually, most of the time), which is graded from 1-5. It has 60 questions. The grading system of this questionnaire is a minimum score of 60 and maximum score of 300.

Osipow's occupational stress questionnaire aims for assessing the person's six dimensions of stress: role of workload, role of incompetence, role of dualism, range role, role of responsibilities and the physical environment. Each of the six dimensions mentioned

above are evaluated by 10 words. The “role of workload” dimension assesses the person’s position concerning the demands of workplace. The “role of incompetence” dimension assesses appropriateness of skills, individual’s education and training and practical features with workplace needs. The “role of duality” dimension assesses the individual’s awareness of priorities, workplace expectations and the evaluation criteria. In “physical” dimension concerned with the workplace, in which the individual is exposed to. Today, this questionnaire is applied as a valid test for measuring occupational stress. This test was introduced in 1981 and has been revised several times. This test reliability is calculated by re-test at the level of job satisfaction. (Cronbach’s alpha: 0.89).

The Cronbach’s alpha coefficient has been used for estimating the tool’s reliability, which obtained as  $\alpha=0.83$  for the entire scale and  $\alpha=0.81$  for the role of workload,  $\alpha=0.78$  for the incompetence role,  $\alpha=0.81$  for the role of dualism,  $\alpha=0.81$  for the range of role,  $\alpha=0.80$  for the role of responsibility and  $\alpha=0.81$  for physical environment for each subscale.

### RESULTS

According to the current research project, which is a pre test- post test (with control group), the best way to analyze the data is using multi-variable covariance analysis (Mancova 1) The data obtained was analyzed using descriptive statistics (mean, standard deviation) and Mancova inferential statistics in SPSS 18 environment after applying the research. The research main hypothesis is that time management training is effective in reducing occupational stress components. The covariance analysis (Mancova) is used for testing the above-mentioned hypothesis. This test is a statistical method that allows the independent variable effect to be examined on dependent variable, while the other variable is removed or destroyed. Therefore, the test hypotheses, including homogenous regression, linear relationship and variance-covariance homogenous matrices and variances similarity are initially examined before doing analysis.

Levine’s test is performed for examining the variance sameness hypothesis. As the Table results show, all the calculated Fs significance level is  $p>05.0$ ; therefore, the variance differences are not statistically significant and the variances equality hypothesis is established.

Table 1: Box’s test for examining the matrix homogeneity

Box’s M	35.646
F	1.458
Df1	21
Df2	7782.645
Sig	0.081

As the Box’s test shows, because Sig  $458/1= (7782.21)$ ,  $F=081.0$  is not significant, the condition for the homogeneity of variance-covariance matrices is established.

Table 2: Loin’s test for considering the test similarity

Variable	Sig	Df1	Df2	F
Role of workload	0.072	46	1	3.39
Incompetence role	0.96	46	1	0.003
Role of duality	0.257	46	1	1.4
Range of role	0.206	46	1	1.648
Responsibility	0.206	46	1	1.648
Physical environment	0.085	46	1	3.107

Table 3: basic average of occupational stress components

Dependent variable	Group	Mean	SD	N
Role of workload	Experiment	27.67	5.78	24
	Control	31.95	4.46	24
Role of incompetence	Experiment	22.95	5.7	24
	Control	30.08	7.02	24
Role of duality	Experiment	16.21	3.16	24
	Control	21.42	6.34	24
Range of role	Experiment	20.29	5.09	24
	Control	24.62	5.32	24
Role of responsibility	experiment	25.21	3.87	24
	Control	31.29	5.84	24
Physical environment	Experiment	19.62	3.93	24
	Control	26.38	7.12	24

As can be seen in Table 4, there are some differences in occupational stress after modifying the experiment and control group marks in occupational stress post test. To check the point that whether this difference is significant and is the result of educational effect or not, the Mancova analysis by the correcting method of “Bon Foruni” ( $\alpha=008.0$ ) was carried out.

As can be seen in the above table, in a combinational variable, time management training effect is partial  $f^2=0.42$ , Wilk’s  $\lambda=0.58$ ,  $p<0.003$  and  $F(25, 2) =4.23$  had a significant effect, that is time management training has been effective in reducing occupational stress and the effect intensity is shown by Eta square share as 42.0 which indicates a high effect intensity.

Table 4: Modified Mean

Dependent variable	Group	Mean: M	Standard Deviation: ST	Community mean confidence limit with 95%	
				High limit	Low limit
Role of workload	Experiment	28.08	1.08	30.27	25.89
	Control	31.55	1.08	33.74	29.36
Role of incompetence	Experiment	31.55	1.08	33.74	29.36
	Control	29.37	1.30	31.99	26.74
Role of duality	Experiment	16.19	1.07	18.36	14.02
	control	21.43	1.07	23.6	19.26
Range of role	Experiment	20.76	1.07	22.93	18.59
	control	24.16	1.07	26.32	21.99
Role of responsibility	Experiment	25.07	1.07	27.24	22.9
	Control	31.43	1.07	33.6	29.26
Physical environment	Experiment	19.75	1.18	22.14	17.35
	control	26.26	1.18	28.65	23.86

Table 5: the effect size test based on Wilk's Lambda

Effect	Value	F	Group freedom rate	Error freedom rate	" Significant level	Effect size
Wilk's Lambda	0.58	4.23	6	35	0.003	0.42

### DISCUSSION

According to this study and other research, it can be concluded that time management training can be effective in reducing nurse's occupational stress as an educational program. What is evident is that time management training is not change individual's living by itself, but changes individual's view concerning life and difficult occupational conditions and causes appropriate decision-making in occupational crisis. Time management training causes individual's better recognition from working conditions and provides situations by which people organize their works by identifying points of power and weakness, proper planning and prioritizing the works. Time management enables people to overcome against stressful conditions, daily problems, life and workings. Therefore, making nurses empowered against stressful factors causes increasing capacity and efficiency.

The Mancova covariance analysis was used for considering the main hypothesis that "time management training is effective in reducing the occupational stress components and this hypothesis is significant ( $p < 0.003$ ); that is time management training is has been effective in reducing occupational stress components and the effect intensity is shown as 42.0 by Eta square share which indicates high effect intensity.

Hashemizade [6] showed, in his research entitled as "studying the relationship between time management behaviors and occupational stress in the supervisions of internal and surgical parts of educational hospitals, that there is an inverse correlation between occupational stress and time management behaviors.

Nemati and Parsaie [8], conducted a research as the correlation between stress and time management and the results obtained showed that there is an inverse and significant relationship between stress and time management, which shows that the more the time management skills in employees, the less they are stressful.

Abdoland *et al.* [9] conducted a research as time management and occupational stress in secondary and high schools managers and the results showed that there is an inverse and significant relationship between stress and time management which shows the more time management skills are used in employees, the less they are stressful.

Baezat and Rad [10] conducted a research as studying the relationship between time management and occupational stress amongst female employees in Al-Zahra University. The research results indicated that time management has a significant role in predicting occupational stress and the occupational stress can be decreased through removing the organizational stressful factors by management and doing high amount of works and the lack of control is the highest source of stressful situations.

Jacks and Ilakowa [11] conducted a research as the relationship between time management as a mediator among stressful factors and employee's stress and the results showed that there is a negative relationship between using time management behaviors and pressure.

Atkins [8] also believed that there is an inverse relationship between time management behaviors and occupational stress.

To explain this findings, it can be said that time management training has been effective in reducing nurse's occupational stress. Understanding the time and its management causes the individuals overcome hard workplace conditions in occupational stressful conditions through recognizing the stressful conditions, proper planning and prioritizing their works.

#### Suggestions:

- C It is recommended that time management training be held for all hospitals and hospital personnel, especially nurses who tolerate more problems and stresses.
- C It is recommended that time management training be considered for all physicians, nurses, radiology staff and generally health personnel and treatment services as in-service periods service.

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