

## Original Article

**Effect of Time Management Workshops in Reducing the Social Procrastination among Emergency Medicine Residents**Hamid Reza Morteza Bagi<sup>1</sup>, Rouzbeh Rajaei Ghafouri<sup>1</sup>, Seyedhossein Ojaghihaghghi<sup>1</sup>, Hoorolnesa Ameli<sup>2\*</sup><sup>1</sup>Associate Professor of Emergency Medicine, Emergency Medicine Research Team, Tabriz University of Medical Sciences, Tabriz, Iran<sup>2</sup>Resident of Emergency Medicine, Emergency Medicine Research Team, Tabriz University of medical sciences, Tabriz, Iran**Corresponding Author:** Hoorolnesa Ameli, E-mail: h.med81@yahoo.com**ARTICLE INFO***Article history*

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**Key words:**Social Procrastination,  
Time Management,  
Emergency Medicine**ABSTRACT**

**Background and Aims:** Medical errors are important in all fields of medicine and have larger consequences in risky and stressful fields like emergency medicine. Social carelessness can cause these errors. On the other hand better understanding of time perception can lead to increased power of management and better decision making. In this study, we aim to evaluate the effect of time management education on social procrastination among emergency medicine residents. **Material and Methods:** In this interventional study, 25 residents in intervention group had a time management workshops for two weeks and we evaluated them for social procrastination before and after intervention. 25 residents were studied and compared as control group. **Results:** Both groups were matched according to baseline findings. Married residents compared to single ones had significantly lower procrastination score ( $p=0.02$ ). The serial changes in procrastination score after the workshop in intervention group was significantly higher than control group ( $p=0.006$ ). **Conclusion:** Education time management skills workshops could be effective in reducing social procrastination among emergency medicine residents. Married residents possibly due to responsiveness in their marriage and management skills have low procrastination.

**INTRODUCTION**

Medical errors are one of the most important health problems in the community, which threatens the safety of patients and even healthy people. To correct and control any error, we must have accurate information on how to occur, the types of errors, the causes and, finally, the ways to deal with them; but, studies about medical errors are far less than other research topics, unfortunately (1). Medical errors can occur in a variety of ways; scientific errors, skill, neglect, inhibition of preventable events, and finally management errors are among the most common medical errors recorded (2 and 3). Social procrastination is postponing and suspending of professional duties (4), based on the definition of terminology. Considering that in the most medical centers, doctors are at the top of management and responsibility; social procrastination can lead to errors such as neglect, avoidable errors and management errors. Negligence in doing duties increases the level of anxiety and mental illness in people (5). This tendency also affects the quality of life of individuals negatively, so that high negligence can reduce the quality of life of individuals (6).

Studies show that in Iran, about 20% of people are negligent with a high degree and 50% of those with moderate

negligence. This negative status in the individual and social area has adverse effects such as a decrease in the level of productivity (7).

Social procrastination means a little personal work in the group that result from a reduction in his responsibility for his individual effort. A better understanding of the time leads to increase managerial power and decision making. In fact, when one sees himself in the right time and place, finally, the correct decision will be made (8, 9). Various factors can be effective for person in managing power and time perceiving; increasing age and social experiences are the most important factors (10).

Considering the high risk situation of emergency medicine in the medical centers and the vulnerability of most students in this field, we have tried to design and implement this research an important step for understanding and controlling the social procrastination phenomenon and thus effective to improve the quality of health care provided to patients.

**MATERIALS AND METHODS**

This cross-sectional and interventional study was conducted at Tabriz University of Medical Sciences in 1394-1394, 2015

and the Ethics Committee of Tabriz University of Medical Sciences has confirmed its method.

The residents included two groups of intervention (25 cases) and control (25 cases) who were randomly selected from among the first year residents (new admissions) and the second and third year (for the purpose of limiting the number of residents) to match and achieve the result with the low error rate.

Information about age, gender, marital status, work experience, level and academic year residents' was recorded in special forms.

Exclusion criteria included people who did not consciously willing to participate in the study and graduate students were excluded.

After completion of the study groups, for each of the two groups, the Safarina social procrastination questionnaire (11) was fully described and completed by the residents.

An educational course of time management workshop was held for 2 weeks for intervention group and then the questionnaires were again completed by the residents in 2 turns (Once immediately after the workshop and one time four weeks later). The standard questionnaire provided contains 23 questions, considering that each question contains 5 grades (Always=5, usually=4, sometimes=3, rarely=2 and never=1) respectively. The total score was 115 and at least 23, and based on definition, scores less than 38, indicative low procrastination and scores higher than 73 indicate a high procrastination.

### Statistical Analysis

Descriptive methods (frequency, percentage, mean  $\pm$  standard deviation) were used for statistical analysis. Chi square test was used to compare qualitative findings and T-test, Mann-Whitney U or one-way ANOVA were used to compare quantitative variables. Also, follow-up test repeated measure of ANOVA was used to evaluate the process of changes in social procrastination before and after the intervention between the two groups. All statistical analyzes were performed using SPSS 17 software and the value of  $p < 0.05$  was considered significant.

### RESULTS

Table 1 summarizes the demographic information of the residents of both participating groups. The results show that there is no statistically significant difference between the two groups in terms of age, gender, marital status, work experience, level and academic year.

Table 1. Basic findings between two intervention and control groups

Considering that the study was conducted at multiple time intervals, not only the comparison of the groups basically but also in the form of changes were also made. The average social procrastination of the residents was similar in terms of sex ( $p=0.50$ ), age ( $p=0.76$ ), duration of work experience ( $p=0.13$ ) and academic year ( $p=0.5$ ) and no significant difference was achieved. In a comparative between groups, no results were obtained ( $p>0.05$ ). The average

**Table 1.** Basic findings between two intervention and control groups

	Intervention group	Case group	P-value
Age	36.88 $\pm$ 5.57	34.04 $\pm$ 5.17	0.06
Gender			0.76
Man	9(36%)	8(32%)	
Woman	16(64%)	17(68%)	
Academic year			0.94
Three	7(28%)	7(28%)	
Two	8(32%)	9(36%)	
One	10(40%)	9(36%)	
Marital status			0.6
Single	3(12%)	1(4%)	
Married	22(88%)	24(96%)	
Length of work experience	5.98 $\pm$ 1.06	5.06 $\pm$ 0.94	0.52

social procrastination rate among single and married residents was 66.75 $\pm$ 7.50 and 56.00 $\pm$ 9.27 respectively, which was significantly higher among single residents ( $p=0.02$ ).

Despite this difference, the changes of social procrastination score decreased significantly between intervention groups before and after intervention; While it increased in the control group ( $p=0.006$ ).

### DISCUSSION

Human errors by definition in all fields are, attributed to do something wrong and accordingly, medical errors are human errors in health care (12). Many studies show that most human errors occur in cognitive and behavioral issues; errors in the health ward are also not excluded and, of course, recognition and studying this issue scientifically will be effective in preventing the occurrence of many threats to human life (13).

Social procrastination as a known error can create damage in the activities of a community or a group (11). If this negligence occurs in the medical community, it can be a prerequisite for a medical error to reduce individual efficacy, therapy group and, above all, the life-threatening patient. If the problems and the field of emergency medicine are combined with this category, the importance of this issue will be further enhanced.

Considering the importance of the subject, it is necessary to use a solution to control and reduce this problem. Studies show that the category of social experience in the form of several factors such as age, marital status and work experience can be effective in reducing social procrastination (10, 14).

This study showed that most residents have some degree of social procrastination, and this procrastination decreases with age and work experience increasing, and marital status; although statistically significant, this decrease was significant only for marital status factors. On the other hand, despite attempts to minimize confusing factors, the level of

social procrastination was lower in the intervention group than in the control group, but the decline of this procrastination after the workshop, emphasized the importance and impact of the provided educations. This result is consistent with studies conducted in other disciplines and shows that the gained experience from time management educations can be effective in reducing social procrastination (15).

Considering the limited number of residents in this study, a number of second and third year residents were included in the study to increase the sample size and, of course, this has affected the results and suggests that, if this problem is solved, the results will be more tangible.

## CONCLUSION

Social procrastination is the basis for medical errors in most emergency medical residents. Procrastination in married residents was less than single. Time management educational workshops reduced the amount of social procrastination of residents.

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