

## Abstract

**Background and purpose:** The ability and speed of action of pre-hospital emergency technicians are important success factors in their missions. It seems that response time and the skills to solve problems are among the most important characteristics of emergency medical personnel. Therefore, this study was conducted with the aim of determining the relationship between problem-solving ability and the response time of emergency medical technicians covered by the Asayar Ardabil system in 2018.

**Methods:** This study was a cross-sectional correlational descriptive study. Using the convenience sampling method, 140 emergency medical services (EMS) workers were included in the study. Response time using Asayar software, problem-solving ability using Hepner-Petersen's problem-solving questionnaire, and Garnevsky's Cognitive Emotion Regulation Questionnaire were used for the sub-goal of cognitive emotion regulation strategies. Data were entered into SPSS 20.0 software and descriptive statistics (frequency, percentage, mean and standard deviation) were used for data analysis and t-tests, one-way variance (ANOVA), Pearson's correlation coefficient and multiple linear regression analysis were used.

**Findings:** The results showed that the average score for problem-solving skills was  $136.84 \pm 14.65$  (range, 107-175 points). Also, the response time for urban missions was  $10.22 \pm 2.45$  minutes, which was significantly more than the defined standard ( $p < 0.001$ ). The response time of road missions was  $10.57 \pm 3.36$  minutes, which was significantly less than the standard ( $p < 0.001$ ). There was a significant relationship between problem-solving ability and cognitive regulation of emotion ( $p < 0.001$ ). Multiple linear regression showed that uncompromised emotion management alone predicts problem solving ability by 15%. Also, no significant relationship was observed between problem solving ability and response time.

**Conclusion:** The situation of response time in road missions is better than the declared standard and it was more in urban missions, however, there was no relationship between problem-solving ability and response time in them, but between the problem-solving ability of emergency personnel Hospitals with non-adaptive emotion regulation strategies had a significant inverse relationship and they have used less non-adaptive emotion management strategies to increase their problem-solving skills, which indicates less use of negative emotion regulation strategies and more use of their positive strategies in solving problems. have been. Therefore, it is suggested to investigate the factors of delays in urban missions by organizing training courses and workshops to use positive emotion regulation strategies to help increase their ability to solve problems.

**Keywords:** problem-solving skills, response time, emergency medical technician, emotion regulation