

## **The Relationship between Functional Movement Screening Test and Prevalence of Musculoskeletal Disorders in Emergency Nurse and Emergency Medical Services Staff Shiraz, Iran, 2017**

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**Abstract :** Introduction: Physical fitness and optimum functional movement are essential for efficiently performing job tasks without fatigue and injury. Functional Movement Screening (FMS) tests are used in screening of athletes and military forces. Nurses and emergency medical staff are obliged to perform many physical activities such as transporting patients, CPR operations, etc. due to the nature of their jobs. This study aimed to assess relationship between FMS test score and the prevalence of musculoskeletal disorders (MSDs) in emergency nurses and emergency medical services (EMS) staff. Methods: 134 male and female emergency nurses and EMS technicians participated in this cross-sectional, descriptive-analytical study. After video tutorial and practical training of how to do FMS test, the participants carried out the test while they were wearing comfortable clothes. The final score of the FMS test ranges from 0 to 21. The score of 14 is considered weak in the functional movement base on FMS test protocol. In addition to the demographic data questionnaire, the Nordic musculoskeletal questionnaire was also completed for each participant. SPSS software was used for statistical analysis with a significance level of 0.05. Results: Totally, 49.3% (n=66) of the subjects were female. The mean age and work experience of the subjects were  $35.3 \pm 8.7$  and  $11.4 \pm 7.7$ , respectively. The highest prevalence of MSDs was observed at the knee and lower back with 32.8% (n=44) and 23.1% (n=31), respectively. 26 (19.4%) health worker had FMS test score of 14 and less. The results of the Spearman correlation test showed that the FMS test score was significantly associated with MSDs ( $r=-0.419$ ,  $p < 0.0001$ ). It meant that MSDs increased with the decrease of the FMS test score. Age, sex, and MSDs were the remaining significant factors in linear regression logistic model with dependent variable of FMS test score. Conclusion: FMS test seems to be a usable screening tool in pre-employment and periodic medical tests for occupations that require physical fitness and optimum functional movements.

**Keywords :** functional movement, musculoskeletal disorders, health care worker, screening test

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