

The effect of 8 weeks' suspension training on sport-related injury predictor factor, performance and musculoskeletal pain in personnel of Iranian Navy

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Background: Navy personnel due to the use of different types of warships and weapons, need proper physical fitness to accomplish their duty and prevent musculoskeletal injuries related to these activities. Therefore, in these personnel, exercise training programs that increase the tasks related physical fitness, to reduce the risk of injury and musculoskeletal pain associated with military activities have always been important. But there is not enough information about which of the training methods can improve the above-mentioned factors simultaneously. Hence the aim of the current study was an investigation of the effect of 8 weeks of suspension training with TRX on sport-related injury predictor factor, performance and musculoskeletal pain in personnel of different branches of Iranian Navy

Methods: Based on inclusion and exclusion criteria, 50 personnel of the Iranian Navy were recruited and randomly assigned to intervention (N= 25) and control group (N=25). The intervention group performed eight weeks of suspension training with TRX three days a week, and the control group did not receive any exercise training and only continued their military routine tasks. The risk of musculoskeletal injury was assessed with functional movement screening test (FMS), physical fitness with Cooper's 12 min running time test, 60 second push-ups test, 60 seconds sit up test, deep squat jump, and musculoskeletal pain assessed with Nordic Musculoskeletal Questionnaire.

Results: The result of the study showed FMS test score, Cooper's 12 min running time test, 60 second push-ups test, 60 seconds sit-up test improved significantly in the intervention group. But deep squat jump and musculoskeletal pain did not change.

Conclusion: According to the results, Applying suspension training can reduce the risk of musculoskeletal injury and improve most of the physical fitness related factors to in the Iranian Navy

Keywords: military personnel injury, military physical fitness, suspension training, musculoskeletal pain