Musculoskeletal Injuries and Associated Healthcare Utilization among Naval Special Warfare Sea, Air and Land Qualification Training students

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Background/Purpose: Sea, Air and Land (SEAL) students go through intense physically demanding training for over a year. The final phase of the training is SEAL Qualification Training (SQT) before becoming a SEAL Operator. The aim of this analysis was to describe musculoskeletal injuries and their impact on healthcare utilization, among a sample of SQT students.

Methods: Injury self-reports were obtained from a sample of 169 SQT students (age: 24.2 ± 2.5 years). Musculoskeletal injuries during a one-year period were described and classified according to their frequency, anatomic location, injury type and cause, activity during injury, associated health care utilization, and potential for prevention.

Results: The frequency of musculoskeletal injuries was 34.9/100 subjects/year. Common anatomic locations were the lower extremity (35/59, 59.3% of injuries) and upper extremity (16/59, 27.1%). Common anatomic sub-locations were the ankle (14/59, 23.7%) and shoulder (9/59, 15.3%). Common injury types were sprain (15/59, 25.4%) and strain (14/59, 23.7%). The most common cause of injuries was running (27/59, 45.8%). Subjects were engaged in physical or tactical training when forty-five injuries occurred (45/59, 76.3%). Healthcare utilization for these injuries was: radiological assessment: 10/59 (16.9% of injuries), rehabilitation 12/59 (20.3%), and pain medication 18/59 (30.5%). Rest was prescribed for 28 injuries (28/59, 47.5%). Forty-eight musculoskeletal injuries (48/59, 81.4%) were classified as preventable. The frequency of preventable musculoskeletal injuries was 28.4/100 subjects/year.

Conclusion: Preventable musculoskeletal injuries cause considerable morbidity and impact healthcare utilization among SQT students. There is a need to investigate potential injury prevention strategies in this population.

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