PROTOCOL BRIEF

Protocol for a scoping review of training-related injuries among females in the military

Rationale

Retention of females in the military is low. Musculoskeletal injuries are one of the primary causes of medical discharge and not deploying. To increase retention, the Canadian Armed Forces would like to understand the real and perceived barriers faced by women recruits.

Implications

Knowledge of the types of musculoskeletal injuries, and underlying risk factors and causes in females in the military will allow for the development of strategies to mitigate these injuries. Changes to training programs may include: training requirements may be modified and personalized biomechanical equipment may be used.

Link to protocol registration:
https://osf.io/umea5/

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Background

- Women entering the military is becoming more common. Musculoskeletal injury is also common within the military and has a significant impact on its members and affects medical discharge, medical downgrade, and not deploying.
- There exists many anthropometric, physiological, and biomechanical differences between men and women, including body composition, musculoskeletal, cardiorespiratory, metabolic, and thermoregulatory function.
- These differences in relation to injury risk have been evaluated with data showing that women are more affected than men.

Objective

- The Canadian Armed Forces is motivated to better understand the real and perceived barriers faced by women recruits. The identification of factors that lead to increased musculoskeletal injuries will provide objective targets for mitigation strategies in order to reduce injuries, especially among those at an increased risk. This will allow for better preparation of the Canadian Armed Forces operators.

Methodology

- ***Review design:*** Scoping review
- ***Eligibility criteria (PCC):*** **Population:** active members of the military aged 18-55 years of age. Studies must include female military members. **Concept:** studies that aim to identify differences (e.g., anthropometric, physiological, biomechanical), risk factors, and causes of musculoskeletal injuries among females in the military. Expected comparators are males in the military and uninjured females in the military, although all other relevant comparators will be considered. **Context:** studies in basic military training and in combat will be included, with no restriction on geographical location.
- ***Literature search:*** The literature search will be conducted in MEDLINE, Embase, the Cochrane Library, CINAHL, and SPORTDiscus for records published from database inception onwards with no language restrictions. This will be supplemented with a grey literature search on relevant websites.
- ***Study Selection/Data Abstraction:*** Records will be screened by two reviewers, first based on title and abstract. Those considered potentially relevant will be further screened against the eligibility criteria at full-text, by two independent reviewers, in duplicate. A standardized data charting form implemented, with data charting performed by one reviewer and verification will be carried out by a second reviewer.
- ***Synthesis:*** Results will be presented using tables and visual representations (e.g., maps, radar charts, bar charts), as appropriate. A narrative summary will be used to further describe the results from the tables and charts. This will be further refined with the knowledge users.

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