Australian Army recruit training course length and recruit injury rates

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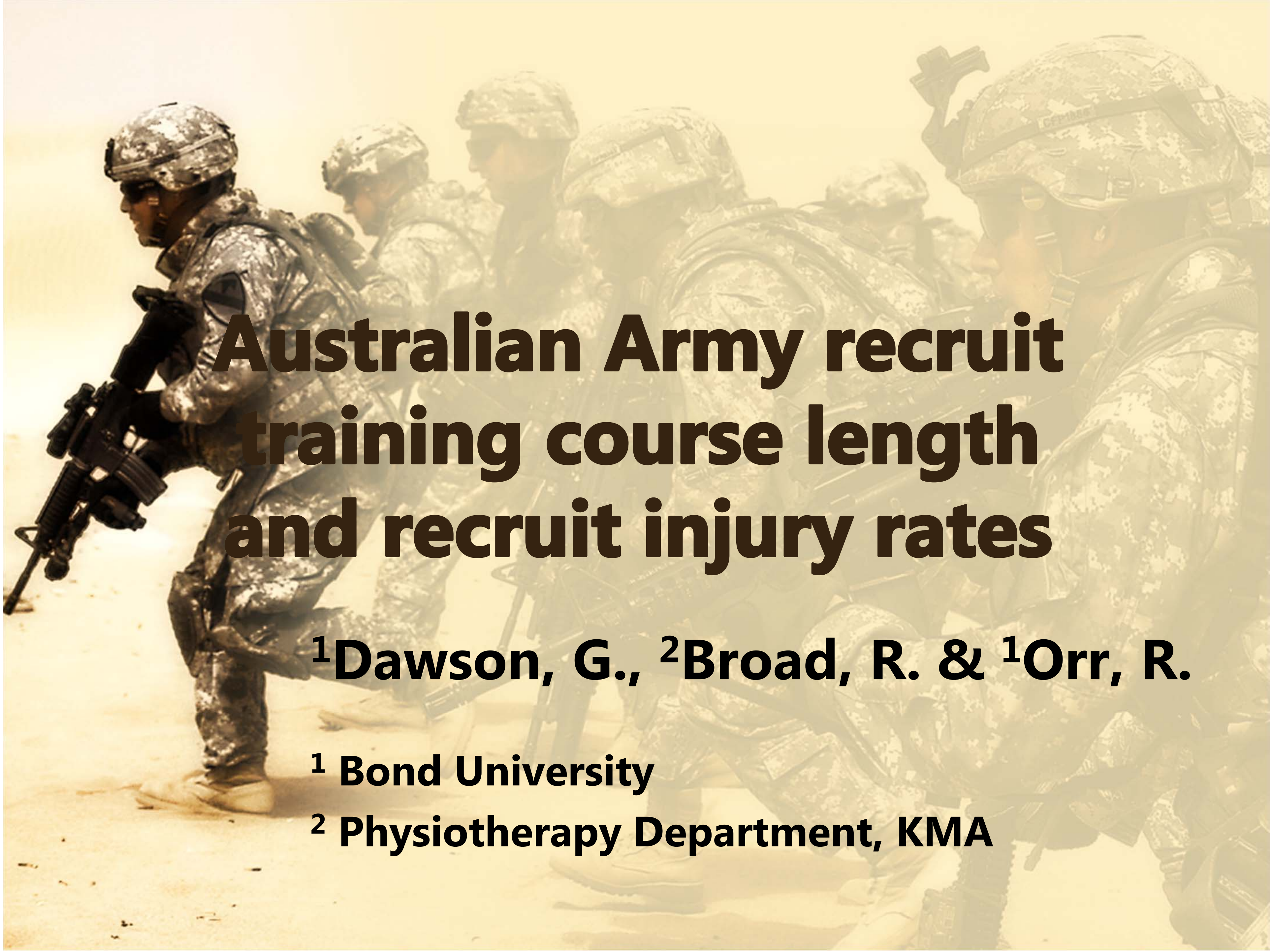

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Aims and Hypothesis

- The longer the training period, the greater the risk of injury?
- Aims:
  - Investigate the influence of lengthening training courses on injury rates
  - Profile injuries that occur.

Participants

- Participants:
  - Australian Regular Army recruits attending Basic Recruit training at Kapooka
  - Recruits were randomly selected for each course

Course	Number of Platoons	Number of Recruits	Male Recruits	Female Recruits
ASC	2	73	56	17
ARC	4	194	152	42
Total	6	267	208	59

Methods

- Data recorded during two different Army recruit training courses over 1 year period (2013)
  - *ARC (80 d) / ASC (100 d)*

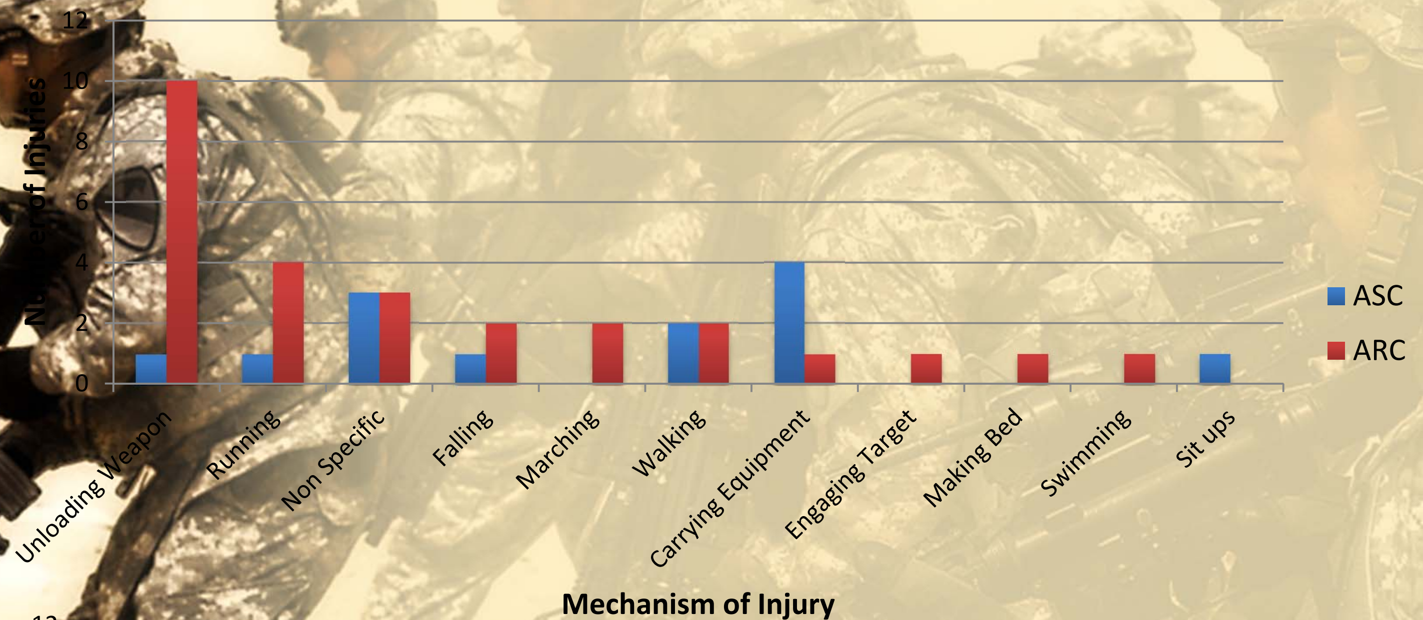
- Injury Prevalence
  - *Number of reported injuries / number of personnel completing respective course x 100*
- Injury Incidence
  - *Number of injuries / number of recruits completing the respective course / course length in days*

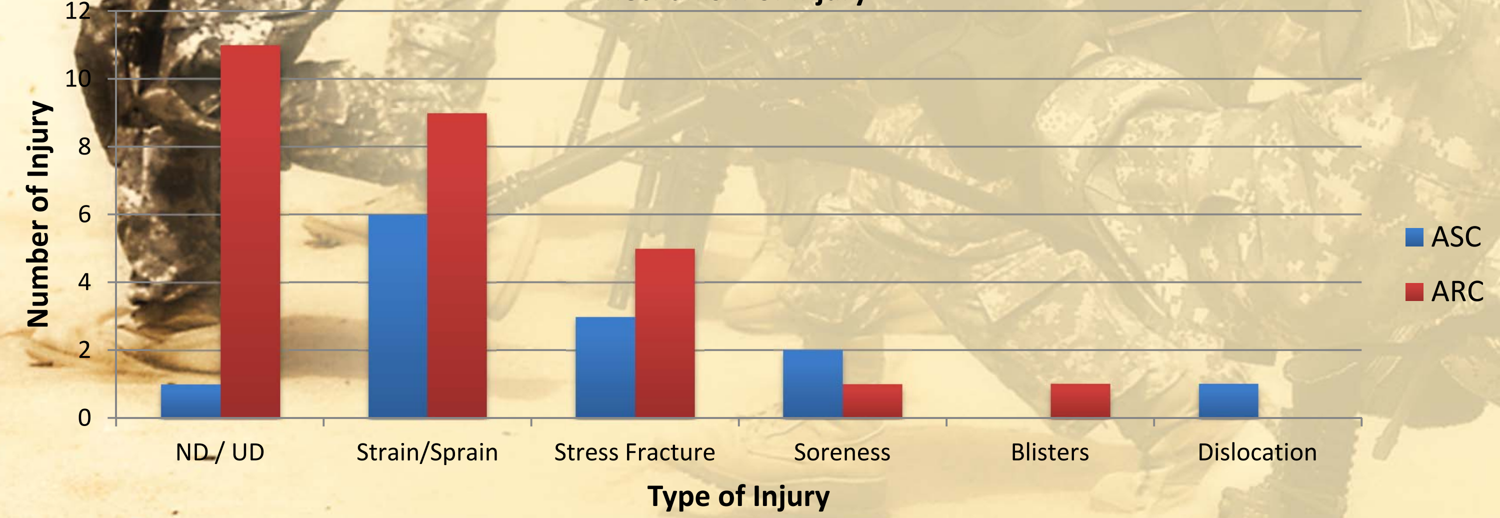
Results

- ASC:
  - 73 recruits, nil excluded
  - 13 recruits injured (17.8%)
    - 38.5% females
- ARC:
  - 194 recruits, 23 excluded
  - 27 recruits injured (13.9%)
    - 33% females

- Injury prevalence:
  - ASC: 17.8 per cent
  - ARC: 13.9 per cent
- Injury incidence:
  - ASC: 17.8 / 100 soldiers / 100 days
  - ARC: 17.4 / 100 soldiers / 100 days

Injury Profile





Anatomical sites of injury

- Collectively the highest anatomical injury sites:
  - Ankle/foot: 20 per cent (n=8)
  - Back/torso: 12.5 per cent (n=5)
  - Lower leg: 12.5 per cent (n=5).
- ASC:
  - Back/torso: 30.7 per cent
  - Ankle/foot 15.4 per cent
  - Shoulder 15.4 per cent
- ARC:
  - Ankle/foot 22.2 per cent
  - Lower leg 14.8 per cent

Discussion

- ASC had notably higher prevalence of injuries compared to ARC
- However when looking at cohort size and exposure to training, both courses had similar incidence rates
  - In contrast to previous studies, the current study revealed much lower prevalence and incidence rates
    - Havenetidis et al (2011):
      - 233 male Greek army recruits, 7 week course
      - 28.3% prevalence
    - O'Connor et al (2000):
      - 480 Marine Corp officers, 6 week course
      - 60.7% incidence
      - 3.9 injuries per 1,000 person hours of physical training

Discussion

- Most common anatomical sites of injuries:
  - Current study:
    - **Sprains and strains**
    - **Stress fractures**
  - These injury types were also found to be the most common type in studies conducted by Havenetidis et al and O'Connor et al.

Conclusion / Take Home Message

- While the ASC had a higher prevalence of injury when injuries took into account exposure, incidence rates were virtually identical
- When considering the ASC against the ARC recruits are no more likely to be injured on one course over the other
- **When investigating injuries based on time periods, exposure to the risk needs to be taken into account**

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