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Psychological Interventions Associated with Injury Prevention: A Systematic Review

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Introduction

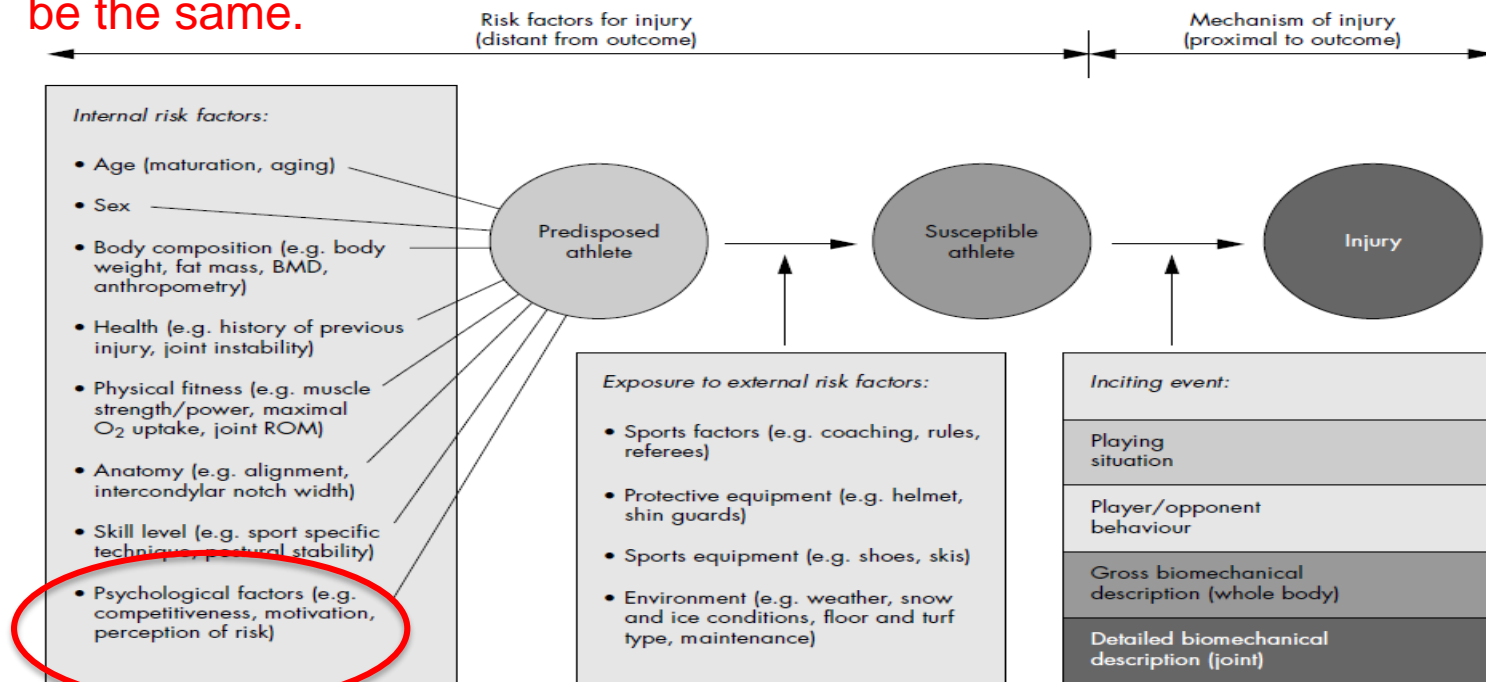
Injuries are multifactorial. Our intervention programmes should be the same.

REVIEW

Understanding injury mechanisms: a key component of preventing injuries in sport

R Bahr, T Krosshaug

Br J Sports Med 2005;39:324-329. doi: 10.1136/bjism.2005.018341



Comprehensive model for injury causation

Introduction: some potential benefits

↓ Stress

Skill learning

↑ Perceived wellness

↑ Thought clarity

↑ Decision making

Altered hormone release

↑ Concentration

↑ Situational awareness

Altered risk perception and risk-taking behaviours

↓ Muscle tension

↑ Movement quality

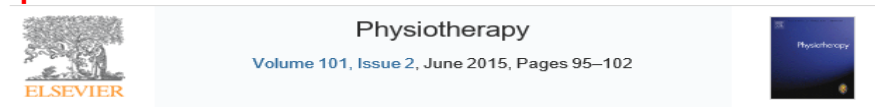
Neuromuscular benefits



Image provided and owned by Emily Roberts

Introduction

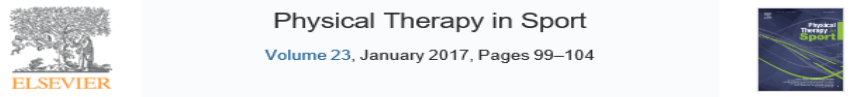
- However...
Multifactorial causation \neq multifactorial prevention?



Systematic review

Musculoskeletal physiotherapists' use of psychological interventions: a systematic review of therapists' perceptions and practice

Jenny Alexanders^a, Anna Anderson^b, Sarah Henderson^a

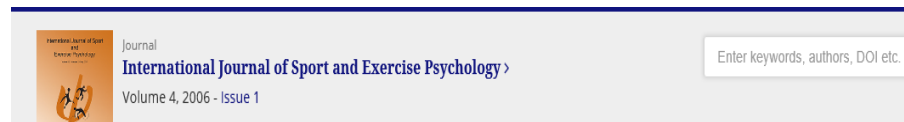


Original Research

Is there a link between previous exposure to sport injury psychology education and UK sport injury rehabilitation professionals' attitudes and behaviour towards sport psychology?

Caroline A. Heaney^a, Claire L. Rostron^a, Natalie C. Walker^b, Alison J.K. Green^a

[Show more](#)



431

Views

4

CrossRef citations

1

Original Articles

Physiotherapists' perceptions of sport psychology intervention in professional soccer

Caroline Heaney



158

Views

0

CrossRef citations

8

Altmetric

Review Article

Knowledge, behaviors, attitudes and beliefs of physiotherapists towards the use of psychological interventions in physiotherapy practice: a systematic review

Christina Driver, Bridie Kean, Florin Oprea & Geoff P. Lovell

Time constraints?
Resource constraints?
Uncertainty?
Intolerance?
Perceived benefits?



Research questions

- (1) What practical recommendations can be made for clinical practice?
- (2) What is the overall methodological quality of included studies?
- (3) What are the salient future research directions to advance this research area?

Method: Systematic review

- PRISMA guidelines
- Data sources: CINAHL, MEDLINE, PsycARTICLES, PsycINFO, SPORTDiscus, Science Direct and PubMed
 - Bibliographic screening
 - Forward citation searching
 - Hand searching of relevant journals
- Mixed-methods Appraisal Tool (Pluye et al. 2011)
- Three independent reviewers (sport psychology, sport science and sports therapy perspectives)
 - Inter-researcher reliability of appraisals = .982

Results: RQ1

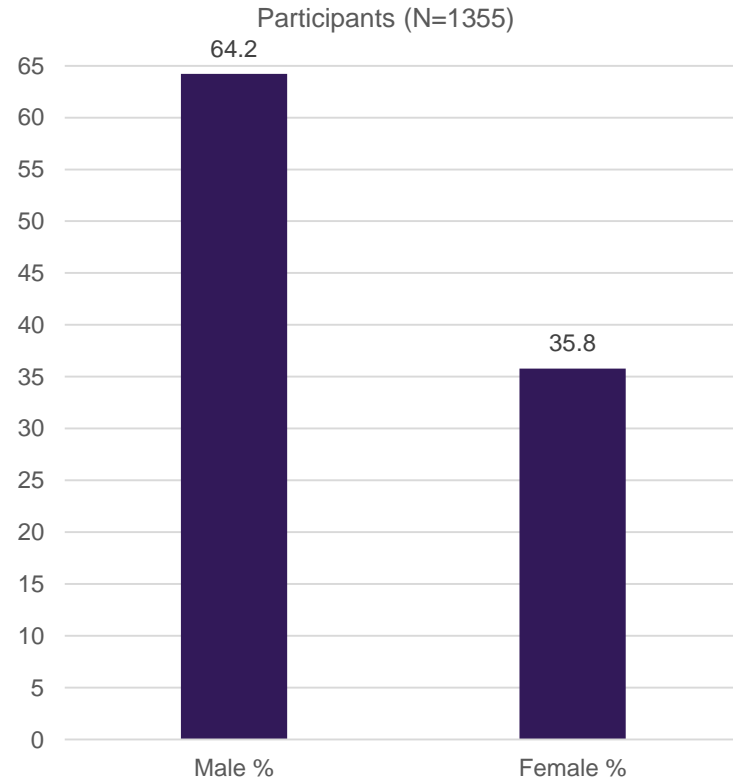
What practical recommendations can be drawn for clinical practice?

All included studies (N=14) demonstrate the potential for injury risk reduction

- Cognitive/somatic relaxation (n=6)
 - Imagery (relaxation) (n=3)
 - Stress inoculation training (n=5)
 - Goal setting (n=3)
 - Attribution training (n=1)
 - Confidence training (n=2)
 - Self-talk (n=1)
 - Autogenic training (n=1)
 - Mindfulness (n=1)
 - Awareness training (n=1)
- No two studies have the same intervention
 - Different session/intervention lengths
 - Few provide sufficient detail to replicate interventions

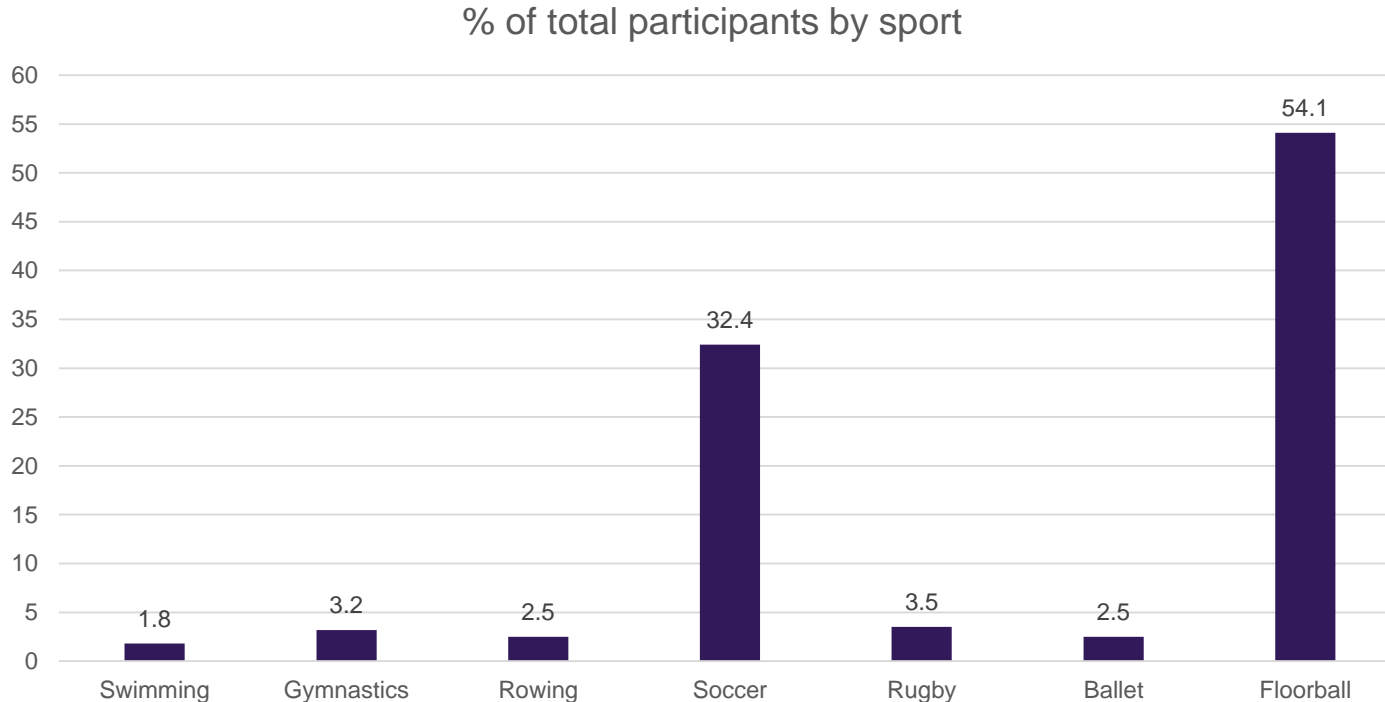
Results: RQ1

What practical recommendations can be drawn for clinical practice?



Results: RQ1

What practical recommendations can be drawn for clinical practice?



Results: RQ2

What is the overall methodological quality?

- Moderate risk of bias (51.9%)
 - Potential selection bias (e.g. selecting 'at risk' athletes for intervention groups)
 - Potential reporting bias (e.g. incomplete details over randomisation)
- Concerns over sample size in 78.6% of studies

Results: RQ3

Future research directions?

- Replication studies
- Psychological skills training aimed at eliciting neuromuscular benefits
- Psychological skills training aimed at enhancing movement quality/skill learning
- Greater representation of female athletes

Take home messages

Where are we now?

All included psychological intervention studies demonstrate the potential to reduce injury risk

What are the existing concerns?

- Moderate risk of bias (selection and reporting)
- Lack of replication studies
- Concerns over small sample sizes in most studies

Where do we go from here?

- Future replication of stress-based studies
- Interventions which can elicit movement quality learning and/or neuromuscular changes may advance the area

Thank you for listening!

Any questions?

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