

The effect of content knowledge workshops on sports skills

Submission date 29/03/2025	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered
		<input type="checkbox"/> Protocol
Registration date 07/05/2025	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
Last Edited 01/04/2025	Condition category Injury, Occupational Diseases, Poisoning	<input type="checkbox"/> Individual participant data
		<input type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims

Enhancing sports skills has been identified as a key strategy in mitigating sports-related injuries. To add insights into this aspect, this study aimed to investigate whether a workshop teaching method could enhance the sports skill performance of professional sports students compared to a standard teaching method.

Who can participate?

The study involved 52 participants comprising a college physical education teacher and their students of similar proficiency levels.

What does the study involve?

The study employed two teaching interventions: 1) a workshop teaching method and 2) a conventional teaching method. A 12-week content knowledge unit was taught using the conventional method to four intact classes (control group), followed by participation in a content knowledge workshop, and subsequent teaching of a six-week content knowledge unit to four different classes (experimental group) by the same instructor.

What are the possible benefits and risks of participating?

Participants in the workshop group may gain a deeper understanding of sports injury prevention, rehabilitation techniques, movement rules, and vocational aptitude, potentially improving their athletic performance and safety.

Both groups receive structured content aligned with professional standards, which could aid in career preparation (e.g., teacher recruitment exams).

The interactive workshop format (e.g., discussions, critical thinking activities) may foster practical skills applicable to real-world sports training and teaching.

Where is the study run from?

Hubei Normal University (China)

When is the study starting and how long is it expected to run for?

July 2020 to December 2022

Who is funding the study?
Investigator initiated and funded

Who is the main contact?
Dr Dandan Liu, liud815832@gmail.com, gs58168@student.upm.edu.my

Contact information

Type(s)

Public, Scientific, Principal investigator

Contact name

Dr Dandan Liu

Contact details

Hubei Normal University (HBNU)
No. 11, Cihu Road
Huangshi
China
435002
+86 15826986633
gs58168@student.upm.edu.my

Additional identifiers

Study information

Scientific Title

The effect of content knowledge workshop on sports skills: a study of sports injuries

Study objectives

This study aims to investigate whether a workshop teaching method could enhance the sports skill performance of professional sports students compared to a standard teaching method.

Ethics approval required

Ethics approval required

Ethics approval(s)

approved 21/05/2021, Medical Research Ethics Review Committee of Guyuan People's Hospital (Ningxia Second People's Hospital) (No. 83, Wenhua Street, Guyuan City, 43400, China; +86 (0) 954-2032718; gysrmyy_531@163.com), ref: 2021-521

Study design

Case-control study

Primary study design

Observational

Study type(s)

Safety

Health condition(s) or problem(s) studied

Sports injuries

Interventions

The selection of the university for this study was based on its collaboration with the university's physical education Teacher Education program, ensuring avoidance of contamination by choosing different faculties: the Faculty of Exercise and Health and the Faculty of Physical Education.

A 12-week content knowledge unit was taught using the conventional method to four intact classes (control group), followed by participation in a content knowledge workshop, and subsequent teaching of a 6-week content knowledge unit to four different classes (experimental group) by the same instructor.

The study involves:

1. A workshop teaching method
2. A conventional teaching method

1. Intervention Name:

Content Knowledge Workshop vs Standard Teaching Method.

2. Why:

To compare the effectiveness of a workshop-based teaching method versus conventional teaching in enhancing sports skills and reducing injury risk among professional sports students.

3. What (Materials/Procedures):

Experimental Group (Workshop):

Content: Vocational Aptitude Test (VAT), Knowledge of Sports Injuries (KSI), Basic Sports Courses (BSC), Advanced Therapies Applied Courses (ATAC), Rehabilitation Knowledge (RK), Knowledge of Movement Rules (KMR).

Format: Interactive workshops (3 hours/week) involving discussions, critical thinking activities, and collaborative skill practice.

Control Group (Standard Teaching):

Content: Identical topics as the workshop group.

Format: Traditional classroom lectures (1.5 hours/session, twice weekly).

4. Who Provided:

A single college physical education teacher delivered both interventions to avoid instructor bias.

5. How:

Workshop: Active learning through group activities, scenario-based problem-solving, and peer feedback.

Standard Teaching: Didactic lectures with textbook-based instruction.

6. Where:

Conducted in university classrooms and facilities at Hubei Normal University.

7. When/Dose:

Duration: 12 weeks for both groups.

Frequency:

Workshop: 1 session/week (3 hours).

Standard Teaching: 2 sessions/week (1.5 hours each).

Total Hours: 36 hours for both groups.

8. Tailoring/Modifications:

Content was standardized across groups but delivered via different pedagogical approaches. No modifications reported during the trial.

9. Adherence:

Participants attended sessions monitored by the instructor.

Dropouts (3 in experimental, 5 in control) due to external factors (e.g., job commitments, illness).

10. Fidelity:

A pilot study ensured protocol consistency.

Physical education experts validated the program design.

Participant Timeline:

Enrollment: Senior college students (retired athletes) recruited via faculty invitations.

Screening: Inclusion/exclusion criteria applied (e.g., no prior content knowledge training).

Randomization: 52 participants were randomized into control (26) and experimental (26) groups via R software.

Intervention Period: 12 weeks of the assigned teaching method.

Assessments:

Pre-test: Before intervention.

Post-test: Immediately after the 12-week intervention.

Total Observation Duration: 12 weeks (no extended follow-up beyond post-test).

Intervention Type

Behavioural

Primary outcome(s)

Educational progress and grasp of key concepts measured using total content knowledge scores (combined performance across VAT, KSI, BSC, ATAC, RK, and KMR) immediately after the 12-week intervention (post-test)

Key secondary outcome(s)

Performance in six core knowledge categories:

1. Vocational Aptitude Test (VAT)
2. Knowledge of Sports Injuries (KSI)
3. Basic Sports Courses (BSC)
4. Advanced Therapies Applied Courses (ATAC)
5. Rehabilitation Knowledge (RK)
6. Knowledge of Movement Rules (KMR)

Measured using standardized teacher recruitment examination papers (multiple-choice, essay, short-answer, and skill-based questions) before the intervention (pre-test) and immediately after the 12-week intervention (post-test)

Completion date

31/12/2022

Eligibility

Key inclusion criteria

Students from two faculties at the University: the Faculty of Exercise and Health and the Faculty of Physical Education

Participant type(s)

Healthy volunteer, Learner/student

Healthy volunteers allowed

No

Age group

Mixed

Lower age limit

50 weeks

Upper age limit

100 weeks

Sex

All

Total final enrolment

52

Key exclusion criteria

Does not meet the inclusion criteria

Date of first enrolment

01/09/2021

Date of final enrolment

15/10/2021

Locations

Countries of recruitment

China

Study participating centre

Hubei Normal University

Faculty of Physical Education

Huangshi City
China

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Sponsor information

Organisation

Columbia Asia Hospital - Cheras

Funder(s)

Funder type

Other

Funder Name

Investigator initiated and funded

Results and Publications

Individual participant data (IPD) sharing plan

The data-sharing plans for the current study are unknown and will be made available at a later date

IPD sharing plan summary

Data sharing statement to be made available at a later date