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The effect of content knowledge workshops on sports skills

Submission date	Recruitment status	[ ] Prospectively registered
29/03/2025	No longer recruiting	[ ] Protocol
Registration date	**Overall study status**	[ ] Statistical analysis plan
07/05/2025	Completed	[ ] Results
Last Edited	**Condition category**	[ ] Individual participant data
01/04/2025	Injury, Occupational Diseases, Poisoning	[ ] 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?
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Contact information

Type(s)
Public, Scientific, Principal investigator

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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

Primary study design
Observational

Study design
Case-control study

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