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Testing an online psychological coaching program to help young elite athletes improve their mental skills

Submission date
01/05/2025

Recruitment status
No longer recruiting

Registration date
02/05/2025

Overall study status
Completed

Last Edited
02/05/2025

Condition category
Other

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[ ] Record updated in last year

Plain English summary of protocol

Background and study aims
Young athletes often struggle with motivation, confidence, and handling pressure, but they rarely get psychological support in their daily training. This study tests an online coaching program to help young elite athletes improve mental skills important for high performance, using strategies like imagery, self-reflection, and habit formation.

Who can participate?
Participants are young athletes aged 13 to 18 years who train competitively in skiing, football, or track and field. They must be fluent in French, able to follow digital instructions, and complete online questionnaires. Parental consent is required for minors.

What does the study involve?
The study has three groups: two intervention groups focusing on imagery or self-analysis, and a control group that only completes questionnaires. Athletes in the intervention groups follow a 4-week program with daily motivational messages and goal reminders. They also have a phone call with a sports psychologist to set specific goals. All participants complete questionnaires before, after, and four weeks post-program. Intervention group athletes also evaluate the program's usability and share their experiences in interviews.

What are the possible benefits and risks of participating?
The program may help athletes develop mental skills like focus, self-reflection, and emotional regulation, and provide personalized guidance to boost motivation and confidence. There are no known risks, and no negative events were reported. Participation is voluntary and can be ended at any time.

Where is the study run from?
The study is coordinated by the Institut des Sciences du Sport at the University of Lausanne and involves athletes from four sports clubs in Switzerland and France.

When is the study starting and how long is it expected to run for?
Recruitment began in January 2022, the program started in February 2022, and data collection ended in April 2022.

Who is funding the study?
The study is funded internally by the University of Lausanne (Switzerland), with no involvement from commercial or pharmaceutical companies.

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
A randomized controlled trial evaluating the efficacy of a psychological skills training e-intervention (PSY-SKILL) compared to a waitlist control in young elite athletes

Acronym
PSY-SKILL

Study objectives
1. The e-intervention will significantly improve psychological skills among young elite athletes compared to a control condition.
2. The e-intervention will result in sustained psychological skill improvements at follow-up, indicating longer-term efficacy.
3. Young athletes will rate the e-intervention as having acceptable usability, as measured by the System Usability Scale (SUS), meeting or exceeding Brooke’s benchmark standards.
4. Qualitative data will reveal positive attitudes and perceived benefits of the e-intervention among participants.

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 12/07/2021, CERUNIL - Research Ethics Commission (Unicentre CH-1015 Lausanne Suisse, Lausanne, 1015, Switzerland; +41 21 692 11 11; cer.unil@unil.ch), ref: E_SSP_042021_00009

Primary study design
Interventional

Study design
Multi-centre three-arm randomized controlled trial with parallel assignment and no masking

Study type(s)
Efficacy

Health condition(s) or problem(s) studied
Sports psychology / Mental skills training in youth athletic development

Interventions
Imagery Intervention Group (F2):Participants received a 4-week mobile-delivered psychological skills training program focused on enhancing imagery ability. Prior to the intervention, they had a structured phone call with a sports psychologist to review their PCDEQ-S results and formulate three personalized implementation intentions related to imagery. Each morning for 28 days, participants received theme-based support messages (based on common psychotherapy change processes), daily reminders, and performance tracking feedback. Assessments using the PCDEQ-S were conducted at baseline (Week 0), post-intervention (Week 4), and follow-up (Week 8).

Self-Analysis Intervention Group (F5):Participants followed the same 4-week structure as the F2 group, but focused on developing self-analysis skills. They also engaged in a pre-intervention phone call with a psychologist to define implementation intentions aligned with self-analysis. The same system of morning messages, reminders, and performance feedback was used. PCDEQ-S assessments were carried out at the same intervals as in the F2 group.

Control Group:Participants in this group received no intervention during the study period but completed the PCDEQ-S at the same three timepoints as the intervention groups (Week 0, Week 4, and Week 8). After the study, they were debriefed and thanked for their participation.

Randomisation Process:Participants were first stratified by gender, sport type, and performance level. A computer-generated random number sequence was used to assign participants into one of the three groups. Allocation was concealed using opaque, sequentially numbered envelopes opened by a researcher not involved in the grouping.

Intervention Type
Behavioural

Primary outcome(s)

Psychological skill development is measured using the Psychological Characteristics of Developing Excellence Questionnaire – Short version (PCDEQ-S) at baseline (Week 0), immediately post-intervention (Week 4), and at follow-up (Week 8).

Key secondary outcome(s)
1. Usability of the e-intervention measured using the System Usability Scale (SUS) at Week 4 (immediately post-intervention)
2. User experience and attitudes toward the e-intervention measured using semi-structured qualitative interviews at Week 4 (immediately post-intervention)

Completion date
01/04/2022

Eligibility

Key inclusion criteria
1. Aged between 13 and 18 years old
2. Currently engaged in competitive sport
3. Minimum of 5 years of experience in their respective sport
4. Affiliated with a regional training center recognized by their sport's governing body
5. Identified as candidates for national youth teams by their regional committee
6. Fluent in French, as the intervention and assessments were conducted in French
7. Able to provide informed consent, with parental consent required for minors
8. Available to participate for the full 8-week study duration (4-week intervention + 4-week follow-up)
9. Possession of a smartphone or device capable of receiving daily text messages

Participant type(s)
Learner/student

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
13 Years

Upper age limit
18 Years

Sex
All

Total final enrolment
105

Key exclusion criteria

1. Ongoing participation in another psychological skills training program during the study period
2. Inability or unwillingness to complete online questionnaires or interact with digital content
3. Lack of parental or legal guardian consent (for participants under 18 years)
4. History of injury or condition preventing regular training during the study period
5. Failure to attend the initial structured interview session with the psychologist

Date of first enrolment
01/01/2022

Date of final enrolment
31/01/2022

Locations

Countries of recruitment
Switzerland

Study participating centre
UNIL
Quartier Centre, 1015 Lausanne
Lausanne
Switzerland
1015

Sponsor information

Organisation
University of Lausanne

ROR
https://ror.org/019whta54

Funder(s)

Funder type
University/education

Funder Name
Université de Lausanne

Alternative Name(s)
University of Lausanne, UNIL

Funding Body Type
Government organisation

Funding Body Subtype
Universities (academic only)

Location
Switzerland

Results and Publications

Individual participant data (IPD) sharing plan
The dataset generated and/or analysed during the current study will be published as a supplement to the result publication

IPD sharing plan summary
Published as a supplement to the results publication