Study Protocol

Official Title:
Effects of Increasing Outdoor Activity Time During School Recess on Physical Activity and Mental Health Outcomes Among Adolescents: A Randomized Controlled Trial

ClinicalTrials.gov Identifier:
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Shanghai University of Sport

1. Background and Rationale

Adolescence is a critical period for physical and psychological development. Insufficient physical activity and increased sedentary behavior may negatively influence adolescent health. School recess provides an important opportunity to increase outdoor physical activity. This study aims to investigate whether increasing outdoor activity time during school recess can improve physical activity levels and mental health outcomes among adolescents.

2. Study Objectives

Primary objective: To evaluate the effects of a 10-week school recess outdoor physical activity intervention on adolescents' physical activity levels.

Secondary objective: To examine the effects of the intervention on adolescents' mental health outcomes.

3. Study Design

This study is designed as a two-arm parallel-group randomized controlled trial. Participants will be assigned to an outdoor physical activity intervention group or a control group. The intervention period will last 10 weeks.

4. Participants

Participants are adolescents aged 12-15 years enrolled in participating schools.

Inclusion criteria:
1. Adolescents aged 12-15 years.
2. Students enrolled in participating schools.
3. Physically healthy and able to participate in physical activity.
4. Written informed consent obtained from parents or legal guardians.

Exclusion criteria:
1. Medical conditions limiting physical activity participation.
2. Inability to complete intervention or assessment procedures.

5. Intervention

The intervention group will participate in a 10-week outdoor physical activity program during school recess. Students will participate in outdoor activities using provided equipment and activity options under teacher supervision. The control group will maintain usual recess activities without additional intervention.

6. Outcome Measures

Primary outcome: Change in physical activity level assessed using the selected physical activity assessment tool.

Secondary outcomes: Changes in mental health outcomes assessed using validated psychological questionnaires, including psychological health status and loneliness measures.

7. Assessment Procedures

Assessments will be conducted before and after the 10-week intervention. Physical activity, physical fitness, and psychological outcomes will be evaluated using standardized assessment procedures.

8. Statistical Analysis

Continuous variables will be summarized using descriptive statistics. Changes between baseline and post-intervention assessments will be analyzed using appropriate statistical methods.

9. Ethical Considerations

This study involves adolescents aged 12-15 years. Written informed consent will be obtained from parents or legal guardians, and participant assent will be obtained before participation. Participant information will be coded and stored securely.

10. Data Sharing Plan

De-identified individual participant data may be shared with qualified researchers upon reasonable request and approval by the study investigators and ethics committee.