LEEDS BECKETT UNIVERSITY

THE UNIVERSITY OF NEWCASTLE AUSTRALIA

MOVEMENT FOR SPORT PLAYKIT RCT

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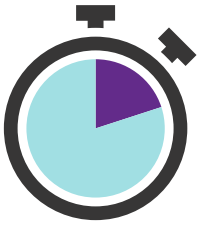
SECTION ONE:

PROJECT OVERVIEW

Recent evidence shows today's children are the least active generation in history.

Only 20%



of children reach the World Health Organisation's recommendation of 60 minutes physical activity a day.

Moreover, children are not achieving average levels of movement competence and are dropping out of organised sport at an increasing rate, globally.

THE REASONS FOR THIS DROPOUT INCLUDE:

01	Loss of focus on fun
02	Overly competitve structure of sport
03	Overemphasis on technical and tactical aspects of the game

TO ADDRESS THESE PROBLEMS

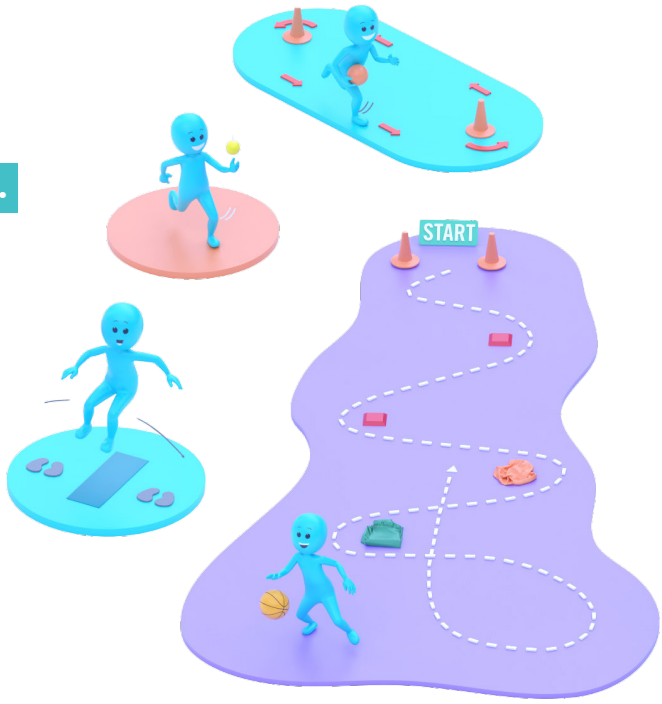
The Moverment for Sport Playkit (MSPK) was designed for coaches and teachers to develop children's movement competence.

This project was undertaken to measure the imact that the MSPK had on children when delivered in PE lessons.

WHAT IS THE MOVEMENT FOR SPORT PLAYKIT?

14 NON-SPORT SPECIFIC GAMES TO DEVELOP MOVEMENT SKILLS

The MSPK is a collection of 14 innovative, dynamic and fun games that are non-sport specific.



These are presented as three distinct phases, increasing in task complexity, perceptual-cognitive skill demand, decision making and interaction with others.

The MSPK resource cards illustrate how to deliver and play the game and provide an assessment framework for the practitioner to score the child's performance.

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FIND OUT MORE

SECTION TWO:

WHAT WE DID

A randomised control trial took place at one site, in a large city in the north of England, between September 2022 and December 2023.

Originally, the MSPK was to be trialled across four sites (England, Ireland, Australia and the USA). The intervention was in planning in the USA and began in both Ireland and Australia but failed to complete in these sites due to school closures caused by COVID-19.

THE TRIAL AIMED TO EXAMINE WHETHER THE MSPK:

- **Improved children's movement competence**
- **Increased MVPA across the school week**
- **Improved physical fitness**
- **Improved self-perceptions of game and physical competence**

WHAT DATA DID WE COLLECT?

Baseline measures were taken of all children at the beginning of the trial, measuring:

- **Movement competence**
- **Physical activity**
- **Fitness**
- **Game and physical self-perceptions**

Following this, schools were randomly allocated into either an intervention or control group. Schools allocated to the intervention group were assigned a facilitator to deliver the MSPK activities, with facilitators selected from a university where they were studying for a PE degree. The control group received their normal planned PE sessions by their teachers across the intervention period.

Post-intervention measures were taken for all children.

RESEARCH SAMPLE

STUDY PARTICIPANTS

257 children (51% female)

Aged 9-10 years (average age 9.1 years)

INTERVENTION GROUP

142 children

5 schools

9-week intervention period

70 minute sessions

To ensure equity for both groups, we delivered the MSPK to the control group schools from September to December 2023.

FIDELITY OF INTERVENTION

To ensure facilitators were delivering the MSPK as it was intended, trained assessors conducted observations of sessions in weeks 3 and 7. Successful delivery of the MSPK was measured using the "OMG a TEST" content indicators as shown shown:

FIDELITY OF THE MSPK DELIVERY CHECKLIST:

01 CORE PRINCIPLE: CLEAR GAME AND SKILL INTRODUCTION & DEMONSTRATION

OMG a TEST:

- Organise a group
- Move students into the GO position for the activity
- Give a demonstration and a few rules simultaneously (Get it Moving!)

CORE PRACTICES:

- Facilitator creates the game in an appropriate space, following equipment and health and safety guidelines
- Begin lessons with a clear statement of the lesson goals
- Reviews prior skills and knowledge (movement focus from previous phases) before beginning instruction
- Provides direct and clear description of 'How to Play'
- Checks for understanding

02 CORE PRINCIPLE: TARGETED ELICITATION

OMG a TEST:

- Try the game - resist over instruction, increase activity exposure
- Evaluate the game and student performance
- Uses 'STOP' to provide feedback with movement focus
- Transitions students effectively between activities

CORE PRACTICES:

- Children perform the target movements
- Facilitator checks for accurate performance and provides feedback
- Facilitator uses 'change the game' to ensure optimum engagement

03 CORE PRINCIPLE: REPEATED GUIDED PRACTICE

CORE PRACTICES:

- Facilitator provides repeated learning and practice opportunities
- Facilitator uses Space Effort Relationsip to differentiate activity
- Guides with cues (verbal, visual, physical)
- Provides individualised guided and varied practice opportunities
- Breaks down complex skills into smaller instructional units, where necessary

04 CORE PRINCIPLE: FACILITATOR RESPONSIVENESS

CORE PRACTICES:

- Provides individualised support and feedback
- Shows enthusiasm and is actively engaged with students
- Maintains class control
- Promotes high levels of reaching intended outcomes

05 CORE PRINCIPLE: MOVEMENT ASSESSMENT

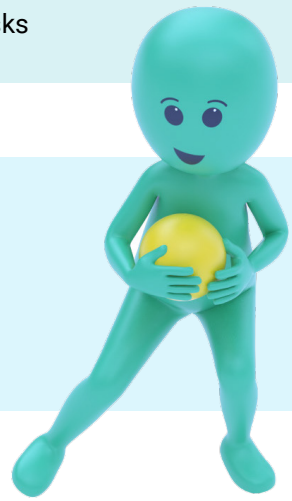
CORE PRACTICES:

- Facilitator identifies which children are to be assessed
- Accurately uses assessment criteria
- Affords repeated opportunities for assessment

06 CORE PRINCIPLE: CHILD ENGAGEMENT

CORE PRACTICES:

- All children are actively participating, little wandering or off task behaviours
- Children are watching and listening when Facilitator is instructing
- Children are focusing their attention on the task and attempting the task as described by the teacher
- Children show enthusiasm for the activity tasks



FIND OUT MORE

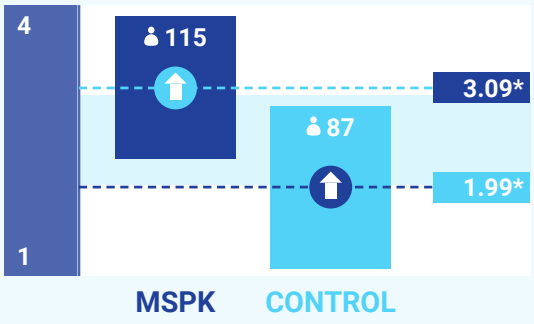
For more details around the research design and its implementation please read the research protocol, found at:
journals.plos.org/plosone/article?id=10.1371/journal.pone.0253747

SECTION THREE:

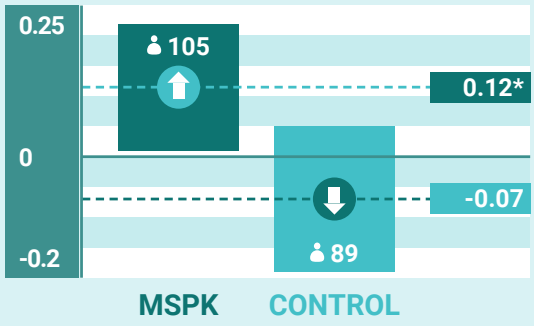
WHAT WE FOUND

The data below displays the mean change from the baseline (95% CI) for 6 different physical measures:

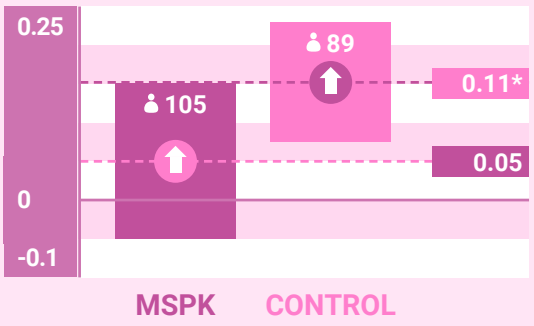
MOVEMENT COMPETENCE



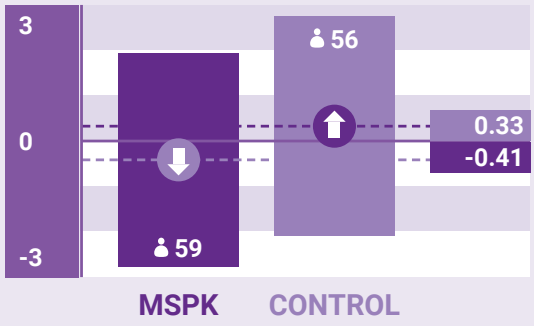
GAME SELF-PERCEPTION



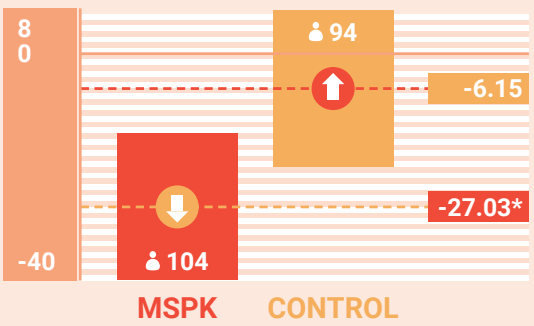
PHYSICAL SELF-PERCEPTION



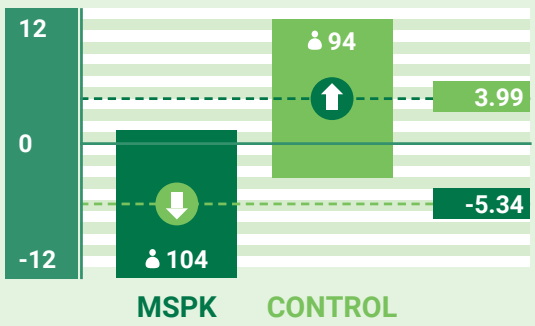
WEEKDAY PA



PLANK



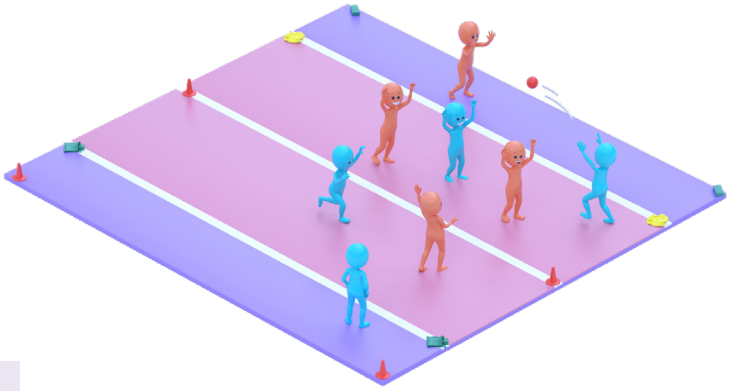
STANDING-JUMP



Significant at $p < 0.05$ a between-group difference of change score (intervention change minus control change)

SECTION FOUR:

WHAT DOES IT MEAN?



THIS DATA PROVIDES EVIDENCE THAT THE MSPK:

- Improved children's movement competence
- Increased children's perceptions of their game play abilities
- Had no positive impact on weekday physical activity and physical fitness

There was little change in physical activity in either the experiment or control group. A longer intervention period or more frequent exposure to the MSPK (e.g. at lunch times or after school) could have resulted in a different response.

SO WHAT?

These findings show that the MSPK fulfils its primary aim to improve children's movement competence. MSPK also has a positive impact on game play self-perceptions.

These findings are significant as we know that increased actual competence and game self-perceptions mean children are more likely to engage with future movement, sport and physical activity opportunities. This could positively influence lifelong physical activity levels and promote better health.

SECTION FIVE:

WHAT DO WE NEED TO DO NEXT?

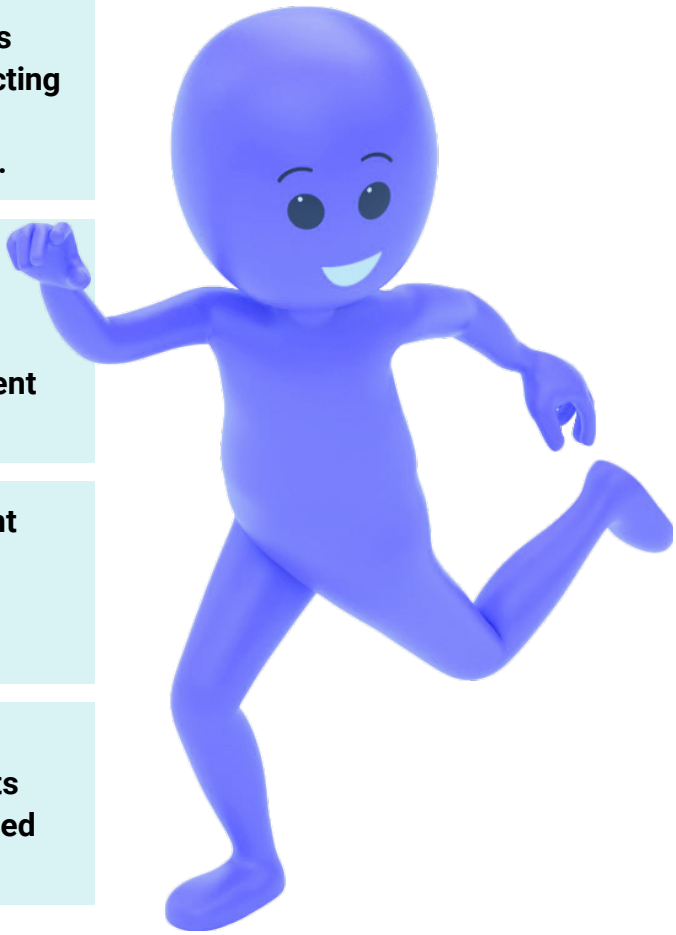
To better understand the impact of the MSPK globally, we propose...

01 Further research should be conducted to address the initial aim of the registered trial through the establishment of a global RCT. This will allow us to assess the effectiveness of the MSPK in affecting children's movement competence, PA and self-perceptions across countries.

02 Further work needs to be undertaken involving teachers and other practitioners who could use the MSPK to support children's involvement in sport and physical activity.

03 Appropriate professional development should be designed, delivered and evaluated to ensure that the intended delivery of the MSPK is maintained.

04 A digital version of the MSPK to be launched and evaluated to measure its feasibility and effectiveness being used by coaches and teachers globally.



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MOVEMENT FOR SPORT PLAYKIT RCT

To find out more about the MSPK please get in touch or read our research protocol in full online:

journals.plos.org/plosone/article?id=10.1371/journal.pone.0253747

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