



UNIVERSITY OF JYVÄSKYLÄ

FACULTY OF SPORT AND
HEALTH SCIENCES

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RESEARCH INFORMATION SHEET

Enhancing motor competence, health-related fitness, and psychosocial wellbeing among children with motor difficulties – A cluster-randomized controlled trial (MoDiSchool), funded by the Research Council of Finland.

1. Request to participate in the research

You are invited to participate in the MoDiSchool research study, which aims to investigate motor skills, physical fitness and psychosocial well-being, as well as related challenges, among pupils in the early years of primary education. The aim is to develop practical tools and operating models to support children in everyday learning environments.

The study will invite pupils in grades 1–3 in schools in Central Finland during the 2026–2027 school year (approximately 1,200), as well as their parents/guardians (approximately 1,200) and teachers (approximately 90).

This information sheet describes the study and participation in it. The study's privacy notice provides information about the processing of your personal data and is available on the study website (<https://www.jyu.fi/fi/hankkeet/modischool>).

2. Voluntary participation

Participation in this study is voluntary. You may refuse to participate in the study, discontinue your participation or withdraw the consent you have already given at any time during the study without providing a reason. This will not result in any negative consequences for you.

If you discontinue your participation in the study or withdraw your consent, personal data, measurement results and other information collected from you up to that point may be used as part of the research data when this is necessary to ensure the validity of the research results.

3. Course of the research

In the MoDiSchool study, pupils' motor skills and factors related to physical activity and well-being are investigated through measurements and questionnaires administered to pupils, as well as questionnaires administered to parents/guardians and teachers. In addition, the study includes an intervention programme during the 2026–2027 school year. The school-based intervention will test the effectiveness of a 18-week physical activity programme on physical and psychosocial factors. Intervention activities will be carried out during lessons under the guidance of teachers and during a physical activity club organized during/in connection with the school day under the guidance of researchers. **The participating schools will be randomly assigned to three different study groups:**

Group 1: pupils will take part in a daily 10-minute physical activity break implemented in classrooms under the guidance of teachers. This is part of the school's normal curriculum-based activities and is intended for all pupils in the class.

Group 2: the same as Group 1, in addition to which pupils who would benefit from additional motor skills practice, based on information from the baseline measurements and assessments by the teacher and parent/guardian, will be offered the opportunity to participate in a researcher-led physical activity club once a week during/in connection with the school day.

Group 3: a control group in which school days and teaching continue as usual without the study intervention programme. Pupils in the control schools participate only in the study measurements. Schools in the control group will receive the intervention programme materials after the final study measurements.

The study measurements will be conducted at baseline (autumn 2026), and at 5-month (spring 2027) and 12-month follow-ups (autumn 2027). Pupils participating in the study may later be invited to follow-up measurements during their basic education. Separate consent will be requested for any such measurements.

QUESTIONNAIRES AND MEASUREMENTS CONDUCTED IN THE PROJECT

The pupil questionnaires examine pupils' experiences of physical activity, motor skills, well-being and learning. The questions concern, for example, pupils' general well-being, perceived physical competence, and matters related to learning and schooling. The pupil questionnaires will be completed at school with the assistance of a researcher. The researcher will read the statements aloud and pace the progress of the questionnaire. The questionnaires will be completed during a lesson. **The parent/guardian questionnaires** examine parents'/guardians' observations of their child's physical activity and motor skills, as well as related challenges and support needs. In addition, parents'/guardians' views of factors related to the child's schooling and psychosocial well-being are examined. Parents/guardians are also asked for background information about the pupil and the family. **The teacher questionnaires** examine teachers' observations of pupils' physical activity and motor skills, as well as related challenges and support needs. In addition, parents'/guardians' views of factors related to the child's schooling, health and psychosocial well-being are examined.

Children's motor coordination / motor skills will be assessed using the Körperkoordinationstest für Kinder (KTK3+) test, which will be administered in small groups at class level. The test includes walking backwards on three balance beams of different widths, jumping sideways, moving sideways, and throwing and catching a ball. The measurements will be conducted on school premises in connection with the school day.

Children's physical fitness will be measured using the Youth Fitness Test (Y-FIT), which includes the 20-metre shuttle run (aerobic endurance), standing long jump (explosive lower-body strength), and handgrip strength measured with a dynamometer (upper-body strength). In addition, pupils' height and weight will be measured, taking into account the sensitive nature of these measurements – the values will not be disclosed during the measurement situation, and the measurements will be conducted in a quiet place shielded from the view of other pupils (e.g. a changing room). The measurements will be conducted on school premises in connection with the school day.

Children's physical activity will be measured for one week using an ActiGraph activity monitor attached to the waist with a belt. The waist-worn monitor will be removed at night. Only a randomly selected subgroup of participants will be invited to these measurements.

Children's motor skills will be assessed using the Movement Assessment Battery for Children – Third Edition (MABC-3), which will be administered individually during autumn 2026. Only a randomly selected subgroup of participants will be invited to the MABC-3 measurements. The MABC-3 includes fine and gross motor tasks, such as manual dexterity (e.g. threading beads), aiming and catching (e.g. throwing a beanbag, throwing and catching a ball), balance tasks (e.g. standing on one leg, walking along a line), and balance and locomotor skills (e.g. standing on one leg, hopping on one leg). The measurements will be conducted on school premises in connection with the school day.

4. Potential benefits of the research

Participation in the study will help increase understanding of children's motor skills, physical activity and well-being, as well as related challenges. **Teachers will receive** information about ways to promote pupils' motor skills, physical activity and well-being. The project materials will be available to teachers during the project and will remain available for their use after the project has ended. The project materials and results support teachers' core responsibility to promote a physically active lifestyle in accordance with the Basic Education Act. **Parents/guardians** may, if they wish, receive information about their children's performance in the motor skills tests. After the intervention, parents/guardians will also receive individual feedback on their child's physical functioning and motor skills, as well as guidance on supporting these skills at home. In addition, **children** will be given age-appropriate feedback about their development using story-based material that includes information about skills and tips for practicing them in everyday life. Schools in the control group will receive the intervention programme materials after the final study measurements. In addition, teachers and parents/guardians may participate in webinars organized by the research group covering themes related to the topics of the study.

During the intervention phase of the project, **pupils randomized to the second intervention group** who would benefit from additional motor skills practice based on information from the baseline measurements and assessments by the teacher and parent/guardian will be offered the opportunity to participate in a motor skills support club, which can be compared to remedial teaching in physical education. The aim of the group-based support activity is to strengthen children's body control, motor skills and enjoyment of physical activity in connection with the school day. The name of the group, provisionally "*Skillikerho*", has been chosen to support a positive self-image among participating children and to avoid stigmatization. Difficulties in motor learning or any other potential problems experienced by a pupil will not be discussed within the group. The risk of stigmatization will be reduced through the design of the activities, communication and openness of the group. Pupils without a need for motor support may also be invited to the group if their participation supports the aims of the group and strengthens the inclusion of all children. Invitation to the group is based on the assessment of teachers, parents/guardians and researchers, as well as the consent of the parent/guardian and the child.

5. Potential risks, harms and discomforts caused by the research and measures taken to address them

There are no significant risks or harms to the participating children and parents/guardians. The measurements of motor skills and physical functioning **consist of physical tasks that are part of the ordinary lives of school-aged children**, and as such do not significantly increase the risk of accidents. The tasks are often highly enjoyable activities for children. However, there may be a small risk of muscle injuries and strains during the measurements. The researchers present have first aid training and first aid equipment available. A pupil cannot participate in the physical functioning measurements during an acute

infection, for example if they have a sore throat or fever. In such cases, the pupil should not attend school either. In addition, a pupil cannot participate in the physical functioning measurements if it is known that the pupil has serious cardiac symptoms, experiences dizziness or loss of consciousness during strenuous exercise, or has been prohibited from exercising by a physician or school nurse. The use of the physical activity monitor does not cause significant harm to the user. Reported potential disadvantages relate mainly to the comfort of wearing the monitor. Experiences of using the monitor have predominantly been neutral or positive.

If concerning features related, for example, to developmental coordination disorder are identified during the motor skills assessments, the observations will be brought to the attention of the consortium leaders. The consortium leaders will then consult, anonymously and without the pupil's personal data, the project expert, pediatric neurologist Heli Sätälä. After this, if a need for further assessment is suspected, we will discuss the matter with the pupil's parents/guardians. It should be noted that all pupils who are identified as having motor challenges will be invited to participate in the intervention phase of the project, during which the pupils will receive the support they need. Teachers of pupils randomized to the control group will also receive the intervention materials after the intervention and follow-up measurements.

6. Costs and compensation for research participants and funding of the research

No compensation will be paid for participation in the study.

The MoDiSchool study is funded by the Research Council of Finland as part of the Academy Programme for Sport Research (ACTIVE).

7. Communication of research results and research findings

The collected data will be used to produce scientific publications and theses, as well as conference and seminar presentations. The research results may also be utilized in teaching and practical applications.

The collected data will be used only for research purposes and will be reported in such a way that no individual respondent can be identified.

8. Insurance coverage for research participants

The activities of the University of Jyväskylä and the research participants are insured. The insurance includes patient insurance, liability insurance and voluntary accident insurance. In research studies, the research participants (test subjects) are insured for accidents, damage and injuries caused by external factors during the research. Accident insurance is valid during the measurements and on journeys directly related to them.

In studies conducted remotely, the University of Jyväskylä's insurance covers only damage that is directly related to the assigned research task and that occurs during the actual instructed research task. The insurance does not cover damage occurring during breaks.

The University of Jyväskylä's insurance is not valid in studies conducted remotely if the participant's municipality of residence is not in Finland.

9. Contact details for further information

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