

FitQuest: Does an active mobile phone game encourage children to take more exercise at school?

Submission date 23/02/2015	Recruitment status No longer recruiting	☐ Prospectively registered ☐ Protocol
Registration date 04/03/2015	Overall study status Completed	☐ Statistical analysis plan ☒ Results
Last Edited 04/04/2023	Condition category Other	☒ Individual participant data

Plain English summary of protocol

Background and study aims

Physical activity has important health benefits for children, but many children do not meet recommended guidelines for the amount of physical activity they take each day. The purpose of this study is to investigate whether an active smart phone game (called FitQuest) which involves running in a playground can motivate children to become more enthusiastic about exercising, and whether that enthusiasm might change their behaviour.

Who can participate?

Year 7 pupils attending a state-funded primary school in Edinburgh, Scotland.

What does the study involve?

Schools are randomly allocated to one of two groups: Exergame group or no exergame group. Pupils from the schools in the exergame group play the FitQuest game during Physical Education lessons in their school for five weeks. Pupils from the schools in the no exergame group take part in the normal Physical Education classes as provided by the school.

What are the possible benefits and risks of participating?

The potential benefits are improvements in confidence towards exercise and possibly increased levels of physical activity. The potential risks are very low - minor risk of tripping and falling similar to any out of door Physical Education class.

Where is the study run from?

Selected Edinburgh primary schools were invited to take part by development officers within Edinburgh City Council.

When is the study starting and how long is it expected to run for?

From May 2013 to May 2014.

Who is funding the study?

Funded by an Engineering and Physical Sciences Research Council

(EPSRC) Impact Acceleration Account at Heriot-Watt University. Note that the Principal Investigator has now moved to University of Edinburgh.

Who is the main contact?

Dr Judy Robertson

judy.robertson@ed.ac.uk

Contact information

Type(s)

Public

Contact name

Prof Judy Robertson

Contact details

School of Education

Simon Laurie House

University of Edinburgh

Edinburgh

United Kingdom

EH8 8AQ

Type(s)

Scientific

Contact name

Prof Judy Robertson

Contact details

School of Education

Simon Laurie House

University of Edinburgh

Edinburgh

United Kingdom

EH8 8AQ

Additional identifiers

Protocol serial number

F12R10074

Study information

Scientific Title

A cluster randomised trial and qualitative study of the effectiveness of a location-based exergame on school children's physical activity

Study objectives

Participants who use FitQuest (an exergame) for a 5 week intervention (for one hour per week during Physical Education lessons) will have increased step count, time spent in MVPA and self-efficacy scores post-test than participants who take part in normal Physical Education lessons as provided by the school.

Ethics approval required

Old ethics approval format

Ethics approval(s)

This study was approved by the School of Life Sciences Ethics Committee at Heriot-Watt University, Scotland on 04/09/13. Written permission to conduct a study in the schools was given by Edinburgh City Council, Scotland (25/06/2013).

Primary study design

Interventional

Study design

Single centre interventional trial with a cluster randomised control design

Study type(s)

Prevention

Health condition(s) or problem(s) studied

This study is about the promotion of sustained physical activity in children.

Interventions

Participants in the intervention arm played an exergame for one hour per week during Physical Education Lessons. Control arm participants took part in the normal Physical Education classes as provided by the school.

Intervention Type

Behavioural

Primary outcome(s)

1. Step count (as measured by NL1000 accelerometer)
2. Minutes spent in MVPA (as measured by NL1000 accelerometer)
3. Self-Efficacy for physical activity, as measured by Pender questionnaire

All measures will be taken in the weeks immediately before and after the intervention (or equivalent time elapsed for control)

Key secondary outcome(s)

Qualitative data will be gathered from interviews with children, teachers. Observation notes will be recorded at each session.

Completion date

01/05/2014

Eligibility

Key inclusion criteria

1. Primary seven pupils (usually aged 10-11)
2. Attending a state-funded primary school in Edinburgh, Scotland.
3. The school head teacher and PE must have agreed to take part.
4. Both male or female participants are eligible

Participant type(s)

Other

Healthy volunteers allowed

No

Age group

Child

Lower age limit

10 Years

Upper age limit

11 Years

Sex

All

Key exclusion criteria

Lack of parental consent

Date of first enrolment

01/06/2013

Date of final enrolment

01/09/2014

Locations**Countries of recruitment**

United Kingdom

Scotland

Study participating centre

Heriot-Watt University

Earl Mounbatten Building

Heriot Watt University

Edinburgh

United Kingdom

EH14 4AS

Sponsor information

Organisation

Heriot-Watt University

ROR

<https://ror.org/04mghma93>

Funder(s)

Funder type

Research council

Funder Name

Engineering and Physical Sciences Research Council

Results and Publications

Individual participant data (IPD) sharing plan

Not provided at time of registration

IPD sharing plan summary

Other

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	22/08/2016		Yes	No
Dataset	FitQuest Qualitative DataSet	09/05/2016	04/04/2023	No	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes
Study website	Study website	11/11/2025	11/11/2025	No	Yes