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Can intelligent personal systems help families to be more physically active?

Submission date
10/04/2019

Recruitment status
No longer recruiting

Registration date
30/05/2019

Overall study status
Completed

Last Edited
29/01/2021

Condition category
Other

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
The high incidence of childhood obesity and the associated risk of developing obesity-related co-morbidities earlier in life mean that schoolchildren are a key target population for the promotion of sustainable healthy behaviours. To date, the majority of health interventions within this population have focused on the school setting; however, the influence of parents and other family members on health behaviours at this stage of the lifecycle is well-established. Therefore, interventions should also target the wider family when seeking to promote physical activity and other health-related behaviours such as healthy eating in school children.

Recent years have seen a rapid integration of technology into everyday life, particularly within the home environment. Intelligent personal systems such as Amazon Echo and Google Home can now be used to stream audio entertainment, control other smart devices and promote health, for example, online fitness coaching. To date, little is known about the potential role that such devices can play in positively influencing health-related behaviours within the home setting.

The proposed project will adopt a cross-sectoral, interdisciplinary approach to explore the role of intelligent personal systems within the home environment for promoting and maintaining physical activity and other health-related behaviours in families. Motivation towards using the devices, and the impact on behaviour once the technology has been removed will also be explored. Additionally, the project will examine engagement with and acceptability of this technology from the participant's perspective.

Who can participate?
Any family who has both access to internet connection (Wi-Fi) at home and owns a smart device will be invited to take part in this research study. We are inviting one parent and at least one child (5 -12 years old) to take part in the study.

What does the study involve?
This study aims to explore if using technology can help families improve health-related behaviours such as doing more physical activity or eating healthier. Two groups will be compared:
• Families who are using technology to assist them with making healthier choices

• Families who are not using technology – this will be the control group that we can compare against the other group.

What are the possible benefits and risks of participating?
Although participation in the study may not bring direct benefits to participants, the results of this study will help us further understand what approaches are useful when trying to encourage families to make healthier choices and improve their health and wellbeing. There are no risks to participants.

Where is the study run from?
Ulster University, UK

When is the study starting and how long is it expected to run for?
January 2019 to June 2019

Who is funding the study?
1. GetAMoveOn+ research network
2. University College London
3. Engineering and Physical Sciences Research Council

Who is the main contact?
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Contact information

Type(s)
Public

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Additional identifiers

Clinical Trials Information System (CTIS)
Nil known

ClinicalTrials.gov (NCT)

Nil known

Protocol serial number
Nil known

Study information

Scientific Title
GetAMoveOn+: Using intelligent personal systems to promote physical activity within the home setting

Study objectives
To evaluate the effect of a home-based technology intervention on levels of objectively measured physical activity in families

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 28/01/2019 Ulster University Research Ethics Committee (Room 26A20, Shore Road, Newtownabbey, Co. Antrim, BT37 0QB; +44 28 9036 6629; n.curry@ulster.ac.uk), ref: REC/18/0107

Study design
Interventional randomised controlled trial

Primary study design
Interventional

Study type(s)
Prevention

Health condition(s) or problem(s) studied
The study is examining how to promote physical activity in the family setting.

Interventions
Intervention Group: will receive an intelligent personal system
Following completion of baseline measurements and randomisation (sealed envelope), those families allocated to group 1 (Intervention group) will be given an intelligent personal system (Amazon Echo) for a period of 12 weeks. An individual user account will be set up for each device and this will be administered by the research team. The research team will use the account information to set weekly tasks, prompts and reminders that will form the basis of the intervention. The behaviour change techniques employed will be focused on the topics of physical activity and healthy eating. In addition to the pre-programmed messages (prompts and reminders) that will be controlled by the research team, families will also be able to use the device for general purposes and utilise its features.

Control Group: Continue as normal without the provision of the technology.

Data will be collected at baseline and follow up (12 weeks). Data collection will take place either at a local community group, or participants will be invited to the Magee campus, Ulster University.

Intervention Type
Behavioural

Primary outcome(s)
Physical activity. Measured at baseline and 12 weeks using an accelerometer

Key secondary outcome(s))
At baseline and 12-weeks:
1. Height and weight: Height (cm) will be measured to the nearest 0.1 cm using a free standing stadiometer and weight (kg) will be measured to the nearest 0.1 kg using digital scales
2. Family Eating and Activity Habits Family Eating and Activity Habits will be assessed using the Revised Family Eating and Activity Habits Questionnaire (FEAHQ).
3. The Exercise Motivations Inventory (EMI-2) will be used to assess participation motives in order to examine such issues as the influence of motives on exercise participation and how such motives might influence the choice of activities undertaken.
4. Exercise Benefits and Barriers Scale Benefits and barriers to exercise will be assessed using the exercise benefits/barriers scale (EBBS) questionnaire.

Completion date
31/12/2019

Eligibility

Key inclusion criteria
1. At least one parent and one child that consent to take part in the study, as the study is evaluating the potential benefit of technology in promoting behaviour change amongst families
2. Internet connection (Wi-Fi) in their home as the home-based technology requires internet to work correctly
3. Ownership of one smart device within the home (e.g. a tablet or smartphone) or access to a computer/laptop to enable the family members to interact with the home-based technology device
4. At least one child aged 5 – 12 years

Participant type(s)
Healthy volunteer

Healthy volunteers allowed
No

Age group
Mixed

Sex
All

Total final enrolment
23

Key exclusion criteria
none

Date of first enrolment
28/01/2019

Date of final enrolment
01/06/2019

Locations

Countries of recruitment
United Kingdom

Northern Ireland

Study participating centre
Ulster University
Derry
United Kingdom
BT48 7JL

Sponsor information

Organisation
Ulster University

ROR
https://ror.org/01yp9g959

Funder(s)

Funder type
Research council

Funder Name
GetAMoveOn+ research network

Funder Name
University College London

Alternative Name(s)
University College London in United Kingdom, Collegium Universitatis Londinensis, UCL

Funding Body Type
Government organisation

Funding Body Subtype
Universities (academic only)

Location
United Kingdom

Funder Name
Engineering and Physical Sciences Research Council

Alternative Name(s)
EPSRC Engineering & Physical Sciences Research Council, UKRI Engineering and Physical Sciences Research Council, Engineering and Physical Sciences Research Council - UKRI, Engineering & Physical Sciences Research Council, The Engineering and Physical Sciences Research Council (EPSRC), EPSRC

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan
The current data sharing plans for this study are unknown and will be available at a later date

IPD sharing plan summary
Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results Participant information sheet	28/01/2021	29/01/2021	Yes	No

Participant information sheet	11/11/2025	11/11/2025	No	Yes