

# Assessing the effectiveness of web technologies to promote healthy living in children: a randomized controlled trial

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		<input type="checkbox"/> Protocol
<b>Registration date</b> 04/08/2015	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
<b>Last Edited</b> 31/07/2015	<b>Condition category</b> Nutritional, Metabolic, Endocrine	<input type="checkbox"/> Individual participant data
		<input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

The rapid increase of obesity and overweight is a global concern. Australia has one of the highest rates of overweight and obesity in the world. It is reported that one in five children in Australia is obese or overweight. Effective preventive measures in childhood obesity are being sought as an urgent need to address this problem. E-Health has been considered as a potential tool to encourage and motivate children to adhere to healthy eating habits and physical activity routines. The main aim of this study is to investigate the effect of web-based interventions to promote healthy lifestyles among children focusing on healthy eating and exercise habits. The study is designed to understand whether web based activities would help improve the knowledge of children regarding health eating and physical activities. This study will also test whether the access to a website containing relevant information and activities would make a difference in children's eating habits and physical activities.

### Who can participate?

Children aged between 8-14 years who attend clinics for general treatment at outpatient clinics at Royal Children's Hospital in Brisbane, Australia.

### What does the study involve?

Participants are randomly assigned to one of two groups. Those in group 1 (control) are not given access to the website and are given their usual treatment. They are, however, offered access to the website after the study is complete. Those participants in group 2 (intervention) are given access to the website which provides information on healthy eating and active lifestyle. They are told not to spend more than 30 minutes per day exploring the site and are given access to it for 16 weeks. During the first eight weeks, participants in the intervention group are contacted by the researchers a number of times through email, the web-based discussion board and chat. Emails were sent out to them every week reminding them to use the website. Both groups of participants are assessed at the beginning of the study, after 8 weeks and then after 16 weeks. This involves filling in a questionnaire on healthy eating and levels of physical activity.

What are the possible benefits and risks of participating?

There is no harm or risk in participating in this study. There may be some benefits to the children who take part in the study. They may learn about healthy eating and physical activity and the value of such lifestyle.

Where is the study run from?

Centre for Online Health, The University of Queensland (Australia)

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

March 2010 to March 2012

Who is funding the study?

Centre for Online Health, The University of Queensland (Australia)

Who is the main contact?

1. Ms Siti Noorsuriani Maon

2. Dr Sisira Edirippulige

## Contact information

### Type(s)

Scientific

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## **Additional identifiers**

**EudraCT/CTIS number**

**IRAS number**

**ClinicalTrials.gov number**

**Secondary identifying numbers**

N/A

## **Study information**

### **Scientific Title**

Usual care versus web technologies to promote healthy living in children: a randomized controlled trial

### **Study objectives**

We conducted a randomized controlled study to examine whether the delivery of health-related information through web technology would improve knowledge about healthy lifestyles and make behavior modification in practicing a health lifestyle in adolescents.

### **Ethics approval required**

Old ethics approval format

### **Ethics approval(s)**

1. The University of Queensland, 01/12/2009, ref: 2009001758
2. Royal Children's Hospital, Brisbane, 04/06/2010, ref: HREC/09/QRCH/109

### **Study design**

Single center randomized controlled trial

### **Primary study design**

Interventional

### **Secondary study design**

Randomised controlled trial

### **Study setting(s)**

Hospital

### **Study type(s)**

Other

**Participant information sheet**

Not available in web format, please use contact details to request a participant information sheet

### **Health condition(s) or problem(s) studied**

Usual care versus web-technology usage for delivering information relating to healthy eating and active lifestyles

### **Interventions**

Upon completion of baseline measures, participants were randomly assigned into either intervention or control group. Participants in the control group received their usual treatment and did not have access to the web intervention. They were asked to go on with their usual daily lives. However, the participants in the control group were offered access to the website upon completion of the follow-up. Both groups were informed at the initial meeting that they will be contacted after eight weeks of trial and eight weeks of follow-up for assessments. The participants in the intervention group received access to a website which provided information relating to healthy eating and active lifestyles for sixteen weeks. Participants were instructed to spend no more than 30 minutes a day exploring the website. During the first eight week trial, several contacts occurred between the principal investigator and the participants in the intervention group through email, the web-based discussion board and chat sessions. Emails were sent to the participants in the intervention group on a weekly basis reminding them to visit the website. The duration of the web intervention was two months. These activities can be divided into two groups; interactive tasks and self-directed tasks. Interactive tasks involved activities where participants in the intervention group had communication with each other in completing tasks. Online discussion forum and real-time chat sessions are examples of interactive tasks. Participants were encouraged to communicate with each other in their groups and to share ideas, opinions and experiences while completing these tasks. The discussion forum was a non-real time interactive task where participants could engage in discussion with others in the group at their own convenience. At the same time, chat sessions were conducted at pre-arranged times. During the 8-week intervention, two chat sessions were undertaken. Self-directed activities during the intervention included reading brief notes, browsing related websites and engaging in games. The participants were also encouraged to engage in self-assessment activities including goal-setting exercises and short quizzes. Goal-setting exercises were divided into food logs, activity logs and sedentary activity logs. These activities were performed on a weekly basis.

### **Intervention Type**

Behavioural

### **Primary outcome measure**

1. Level of healthy eating was measured by the number of portions of fruit and vegetable intake according to the Australian Guide to Healthy Eating (AGHE). Daily intake scores of fruit and vegetables were divided into two categories: fruit and vegetable intakes that meet the AGHE recommendations and those that do not meet AGHE recommendations. In order to make these decisions, data were obtained from the questionnaire.
2. Level of physical activity was measured by the frequency of physical activity and sedentary behaviour, which were based on the Australia's Physical Activity Recommendations. The weekly frequency scores of the physical activity and sedentary behaviour were divided into two categories: scores that meet national recommendations and those that do not meet the recommendations.

Data obtained from the questionnaire were used to assess the level of knowledge relating to eating and physical activities of the participants. The questionnaire included 11 questions relating to nutritional knowledge.

### **Secondary outcome measures**

Psychological factors and acceptance of the website by the participants. The psychological factors concerning self-efficacy beliefs, barriers to changes to adopt healthy practices and evaluation of the acceptability of the website were examined

### **Overall study start date**

01/03/2010

### **Completion date**

01/03/2012

## **Eligibility**

### **Key inclusion criteria**

Participants of this study were children who attended the clinics for general treatment at outpatient clinics at the Royal Children's Hospital in Brisbane, Australia.

### **Participant type(s)**

Healthy volunteer

### **Age group**

Child

### **Sex**

Both

### **Target number of participants**

100

### **Key exclusion criteria**

1. Children and adolescents who were under ongoing treatment for weight problems and eating disorders prior to the baseline stage
2. Children and adolescents who were unfamiliar with computer and web technology use
3. Children and adolescents who had insufficient English language proficiency

### **Date of first enrolment**

01/09/2010

### **Date of final enrolment**

01/04/2011

## **Locations**

### **Countries of recruitment**

Australia

**Study participating centre**

**Centre for Online Health, The University of Queensland**

Level 2, Princess Alexandra Hospital

Woolloongabba

Brisbane

Australia

4102

## **Sponsor information**

**Organisation**

Centre for Online Health, The University of Queensland

**Sponsor details**

Level 2, Princess Alexandra Hospital

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QLD 4102

**Sponsor type**

University/education

**ROR**

<https://ror.org/00rqy9422>

## **Funder(s)**

**Funder type**

University/education

**Funder Name**

Centre for Online Health, The University of Queensland

## **Results and Publications**

**Publication and dissemination plan**

We intend to publish final outcomes in peer reviewed journals relevant to telemedicine and health promotion. Approximate publication year would be 2015. We are also intending to

present final outcomes in international conferences relating to telemedicine and health promotion. One such conference is: Annual Conference on the Successes and Failures of Telehealth hosted by the University of Queensland, Centre for Online Health.

**Intention to publish date**

01/12/2015

**Individual participant data (IPD) sharing plan**

**IPD sharing plan summary**

Available on request