

# School-based intervention to enable school children to act as change agents on weight, physical activity and diet of their mothers

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## Abstract

### Background

School health promotion has been shown to improve the lifestyle of students, but it remains unclear whether school-based programs can influence family health. We developed an innovative program that enables school children to act as change agents in promoting healthy lifestyles of their mothers. The objective of this study was to examine the effect of the child-initiated intervention on weight, physical activity and dietary habit of their mothers.

### Methods

A 12-month cluster randomized trial was conducted, with school as a cluster. Participants were mothers with grade 8 students, aged around 13 years, of 20 schools in Homagama, Sri Lanka. Students of the intervention group were trained by facilitators to acquire the ability to assess non communicable disease risk factors in their homes and take action to address them, whereas those of the comparison group received no intervention. Body weight, step count and lifestyle of their mothers were assessed at baseline and post-intervention. Multi-level multivariable linear regression and logistic regression were used to assess the effects of intervention on continuous and binary outcomes, respectively.

### Results

Of 308 study participants, 261 completed the final assessment at 12 month. There was a significantly greater decrease of weight and increase of physical activity in the intervention group. The mean (95 % confidence interval) difference comparing the intervention group with the control group was −2.49 (−3.38 to −1.60) kg for weight and −0.99 (−1.40 to −0.58) kg/m$^2$ for body mass index. The intervention group had a 3.25 (95 % confidence interval 1.87–5.62) times higher odds of engaging in adequate physical activity than the control group, and the former showed a greater number of steps than the latter after intervention. The intervention group showed a greater reduction of household purchase of biscuits and ice cream.

### Conclusions

A program to motivate students to act as change agents of family's lifestyle was effective in decreasing weight and increasing physical activity of their mothers.

### Trial registration

Sri Lanka Clinical Trials Registry SLCTR/2013/011.

## Biography

21 years experience on community based intervention.(from 1996)

- **Current Occupational status -** Executive Director,

  The Foundation for Health Promotion,

Technical Input

UNICEF

General Optimal Adjustment and Improving wellbeing of Families and Communities affected by the Tsunami

WHO

Cardiovascular Health Research in Developing Countries( IC Health), through the center for chronic disease control (CCDC).

NCGM (National Center for Global Health Medicine Japan)

To improve well being of students ,their families, and staff in the given schools

Through a health promotion intervention

NCGM (National Center for Global Health Medicine Japan)

Weight reduction programe of obese mothers through the school students

RESEARCH

Cardiovascular Health Research in Developing Countries( IC Health), through the center for chronic disease control (CCDC).

Baseline and End line survey on weight reduction programme in Homagam conducted

National center for Global health and Medicine

Publication

"Practical manual on Health promotion"

Joint authorship with Prof. Diyanath Samarasinghe

Published by Health Education Bureau, Ministry of Health, Sri Lanka

International Conferences

a) Joint International Tropical Medicine meeting 2012 in Thailand
b) Joint International Tropical Medicine meeting 2013 in Thailand

- Diploma in **Health Promotion** Rajarata University (with merit pass)
- Diploma in Human Resource Management- Ceylinco Business school (with merit pass)