



# APRU Global Health Conference 2021 GLOBAL URBAN HEALTH

16-18 November 2021

The University of Hong Kong, Pokfulam, Hong Kong

## Protocol for School-based education programme to reduce salt: Scaling-up in China (EduSaltS)

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### Background

Long-term high dietary salt intake is a major factor that increases raised blood pressure (BP), which in turn increases the risk of cardiovascular disease (CVD), a leading cause of death and disability worldwide.

China has the highest salt intake globally, with average intake above 10g/d for adults. Different from developed countries, 70-80% of the salt in the Chinese diet is added by the consumers during cooking or in sauces; therefore reducing salt from home cooking is an important strategy to reduce salt intake in China.

Previous research has proven that the school-based education program, in which schoolchildren were empowered to influence their families, is an effective approach to reduce salt intake in both children and adults. This also led to a fall in systolic blood pressure in adults, and could prevent about 200,000 deaths from CVD a year in China.

### Purpose

- To develop a feasible, sustainable and adaptable intervention service package for salt reduction education targeting primary school students and their families
- To incorporate the intervention package into existing school health education system and roll out in pilot areas of China and then nationwide



School-based education programme to reduce salt: Scaling-up in China

Should you have any enquiries, please feel free to contact us at [jsun1@georgeinstitute.org.cn](mailto:jsun1@georgeinstitute.org.cn)



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Phase 1: Preparation & Pilot study & Refinement  
(Dec 2019-Sep 2021)  
Intervention material development & pilot study

Phase 2: Scale-up in project sites  
(Oct 2021-Jun 2023)  
Implementation of school-based salt reduction model

Phase 3: Nationwide scale-up  
(Jun 2022-Dec 2023)  
Wider implementation through health education system

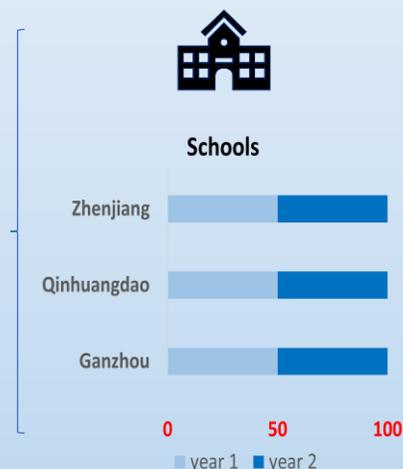


Fig 1. Overview of the stepwise approach of the research, milestones and timeline

- Primary outcome: Change of knowledge, attitude and practice (KAP) in salt reduction of school children and their families in all three sites
- Secondary outcome: Change of 24-hour urinary sodium, in Zhenjiang & Ganzhou

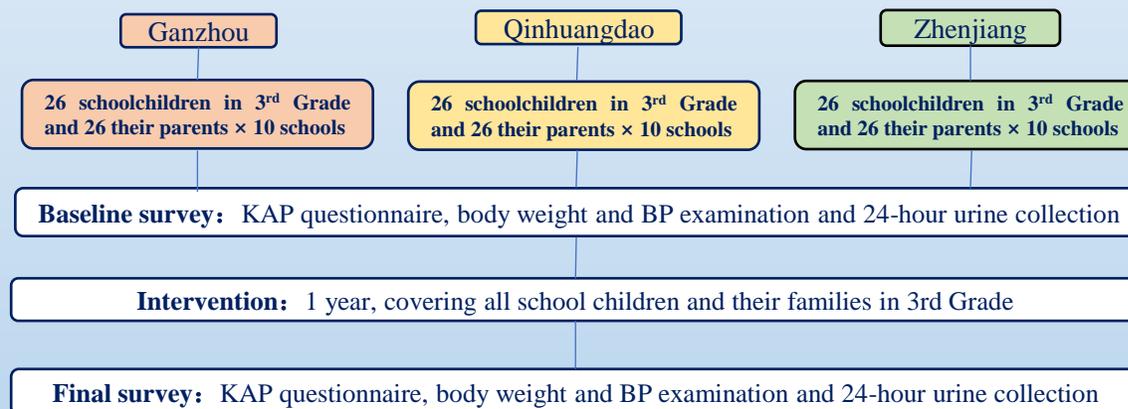


Fig 2. Overview of study methods to evaluate the effects

### Methods

In the EduSaltS programme, with the support of primary schools, the grade 3 school children and their family members will receive a mHealth-based health education course, including a series of cartoon courses covering original education plus salt reduction, and followed by course evaluation, life practice, healthy environment development, performance evaluations and competitions among students/families/schools.

As a scaling-up programme, process evaluation and economic evaluation will be carried out to evaluate the effects of EduSaltS. Process evaluation will use both quantitative data and qualitative data to monitor the programme and health economic evaluation will evaluate both short-term and long-term effects related to direct and indirect costs.

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(Children focus groups)



(Family member focus groups)

Fig 3. Focus groups in Zhenjiang on Sep,2020

### Results

Currently, the team has completed one of the study pilots as planned and refined the intervention materials. The final intervention platform is much comprehensive and flexible compared to previous studies, including intervention & management WeChat Mini programmes a data management website platform and supportive strategies to support the implementation of programme.

### Conclusions

Although the programme is underway, the results of pilot study is encouraging. Educating children via WeChat mini program about the harmful effects of excessive salt intake is expected to improve health habits and change health beliefs of children and affect their families, thereby reducing the incidence of CVD in a long term.



(WeChat mini program)



(Posters)



(Teacher PPT)

Fig 4. EduSaltS intervention packages

### Expected impacts

The immediate benefit from a reduction in salt intake is to lower blood pressure. A lower salt intake will reduce the risk of suffering a stroke, heart attack or heart failure for adults and prevent the development of hypertension and CVD later in life for children. A reduction in population salt intake will have a large benefit on health and economy. Policy impact will be achieved with the local education/health authorities working together to address the health challenges through supporting the scale-up package integrated into the school health education system and the health promoting school platform. This will set a good model for other regions in China and even other countries to learn.