



The George Institute
for Global Health India

PROJECT: “SALT REDUCTION CAMPAIGN IN SCHOOLS”

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I. Background

Foods that are high in salt, are typically nutrient-poor and energy dense.¹ Consuming these types of foods may be associated with increased risk of obesity, which can lead to non-communicable diseases, such as heart disease, type 2 diabetes and some cancers. High salt intakes around the world are contributing to raised blood pressure and high blood pressure is a major risk factor for heart disease and stroke.² High blood pressure is estimated to cause 7.5 million deaths globally, almost 13% of all deaths, according to the World Health Organization (WHO).³ Robust scientific evidence shows a significant dose-response relationship between reductions in salt intake and decreases in blood pressure.⁴

In India, the amount of dietary salt consumed is very high across different regions, which makes people more vulnerable to high blood pressure. Current estimates indicate that 33% of residents in urban areas and 25% of residents in rural areas in India have high blood pressure.⁵ Over 200 million Indians were suffering from high blood pressure in 2015, according to a new study published in the Lancet Medical journal.⁶

Recent research by the George Institute for Global Health reported that Indians are consuming about 10.98 g of salt per day – this is more than twice the WHO recommendation of 5 grams per day.⁷

Like adults, intake of excess salt consumption in children is also linked with increased blood pressure. There is strong evidence showing positive correlation between sodium intake and development of obesity, high blood pressure,⁸ and stomach cancer,⁹ including chronic kidney disease,¹⁰ osteoporosis, asthma and multiple sclerosis. Many studies including a cluster randomized controlled trial in china showed that a reduction in salt intake in children would significantly lower blood pressure.¹¹

Various studies on the salt intake of children and adolescents in developed countries have reported that salt intakes are high and above the WHO recommendation.¹² Salt intake amongst schoolchildren in India has increased due to greater consumption of fast foods, salty snacks, processed and street foods. The preference for salty food among children is established very early due to change in the dietary patterns. Furthermore, processed and junk foods are affordable and accessible, which attracts children easily.

Reduction in sodium intake to low levels and high potassium intake, would have a significant public health benefits resulting from reductions in blood pressure levels, the incidence of stroke, and other blood pressure-related diseases.¹³ Reducing salt intake is the key cost-effective public health intervention to reduce the risk of cardiovascular diseases in both developed and developing countries.¹⁴ India have adopted a 30% reduction in mean population salt intake by 2025 as part of the '25 by 25' initiative for the control of non-communicable diseases.¹⁵

II. Purpose of the Campaign

The purpose of the campaign is to promote positive changes in knowledge, attitudes and behaviour related to salt intake amongst school children. The key focus areas are:

1. Educating children on the relationship between salt (sodium) and health and communicating healthy-eating messages that emphasize decreasing consumption of salted or processed foods and increasing consumption of foods low in sodium and high in potassium such as fruits, vegetables and dairy products.
2. Raising awareness of the harmful effects of salt on health and the benefits of salt reduction.

The proposed action is in line with the WHO global monitoring framework for the prevention and control of non-communicable diseases (2013-2020).¹⁶

III. Rationale and Objectives

The scientific evidence strongly indicates that high salt diet causes high blood pressure in children where its effects may be enhanced by other factors including obesity and with increasing age. Many studies suggest that high salt diet should be avoided as dietary habits are developed in childhood and can be quite difficult to modify later in life.¹⁷ Levels of salt consumption and dietary practices having high awareness of salt-related health issues and a good knowledge of food sources of sodium is very important health education for school-aged children. However, no health education to promote salt reduction as part of healthy diet have been recently carried out for schoolchildren in India. Thus, the education programme using health education lessons targeted at schoolchildren is very cost-effective salt reduction strategy and is effective in lowering salt intake in children.¹¹

General objective:

The overall aim would be to increase awareness on the health risks associated with high salt intake and the health benefits of dietary salt reduction among schoolchildren.

Specific objectives:

Specifically, the action aims to raise:

- Knowledge regarding salt recommendations for adults and children
- Knowledge about the dietary sources of sodium in food
- Promote consumption of foods with a low sodium and high potassium
- Conveying salt reduction messages to children then they'll deliver to their families to reduce use of salt in cooking and discretionary salt use at the table

IV. Expected Outcomes

- 65% increase in the knowledge about ill effects of excess sodium intake on health
- A change (60%) in children's dietary patterns to low salt diet
- 90% increase in the ability of children to read nutrition information from packaged foods.
- Improved understanding of the relationship between salt, sodium, processed foods and salt content of commonly consumed foods.
- Publish reports and papers in the academic/scientific journals about key learnings of the campaign, information in school newsletters and posters on bulletin board

V. Strategy

The salt reduction campaign is based upon the Communication for Behavioural Impact (COMBI) framework which utilizes an integrated communication model to enact community advocacy and impact using 2 main components - school intervention and promotion. The school intervention will engage schoolchildren by communicating healthy-eating messages that emphasize decreasing consumption of salted or processed and increasing awareness on harmful effects of salt on health. The promotion of the key messages on salt reduction will target communities via online, print and social media channels. (See Figure 1)

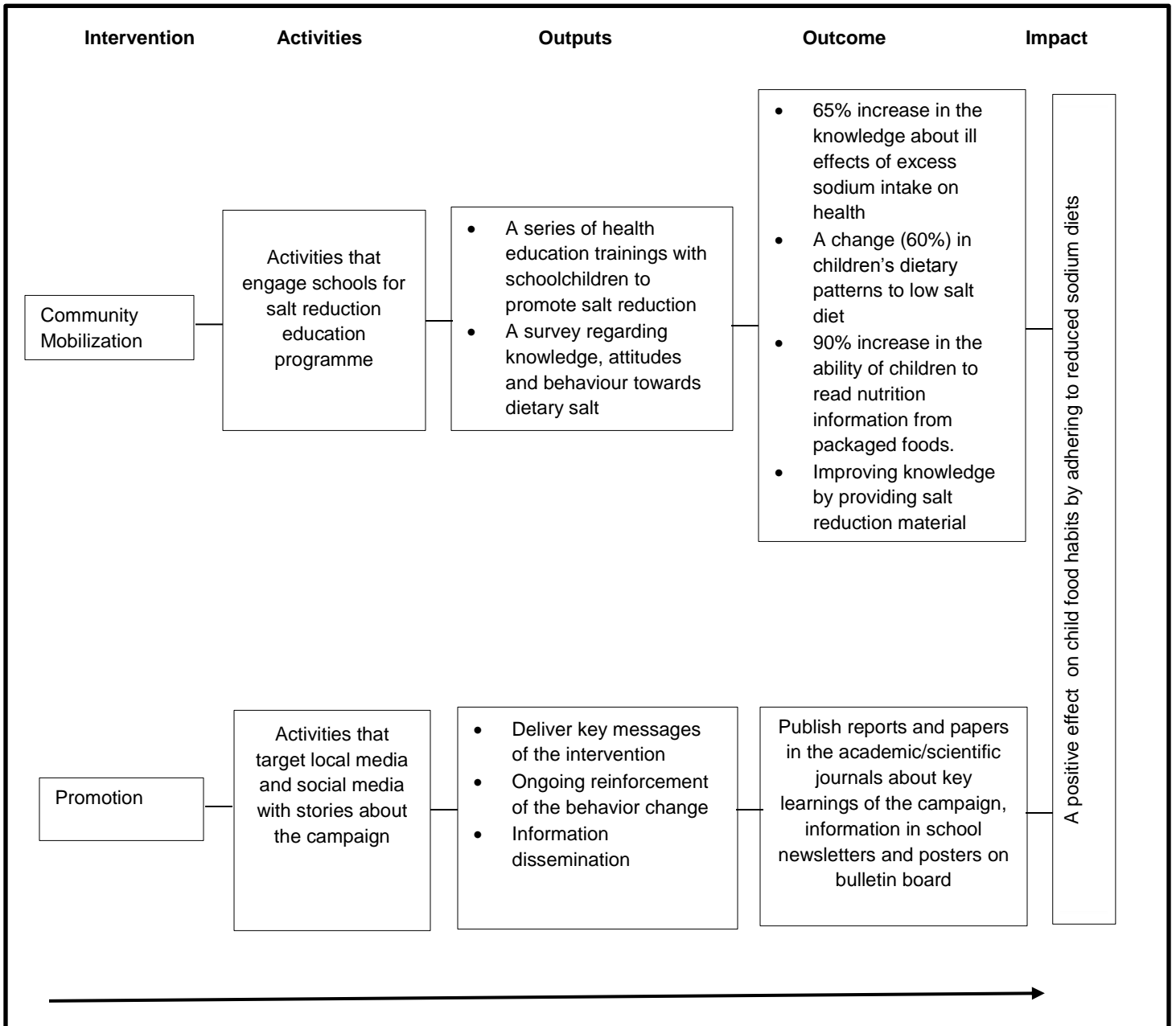


Figure 1. Logic Model: Communication for Behavioral Impact (COMBI) for salt reduction.

VI. Design

Participants: The target group will be schoolchildren aged 8 years and above recruited through convenience sampling. A total of 1000 schoolchildren from 20 schools (50 children per school) will be included directly in this campaign. Indirectly we will be sensitizing ~ 15000 children.

Location(s): Hyderabad (Telangana) and New Delhi.

Duration of the project: 6 months

Schools selection & coverage: The awareness campaign will cover 20 schools, that is, 10 government schools and 10 private schools in both Hyderabad city, Telangana state and New Delhi, India. Government schools from semi-urban (slum) areas will be included in both cities. The selection process of schools and participants for the study is given in the Figure.2.

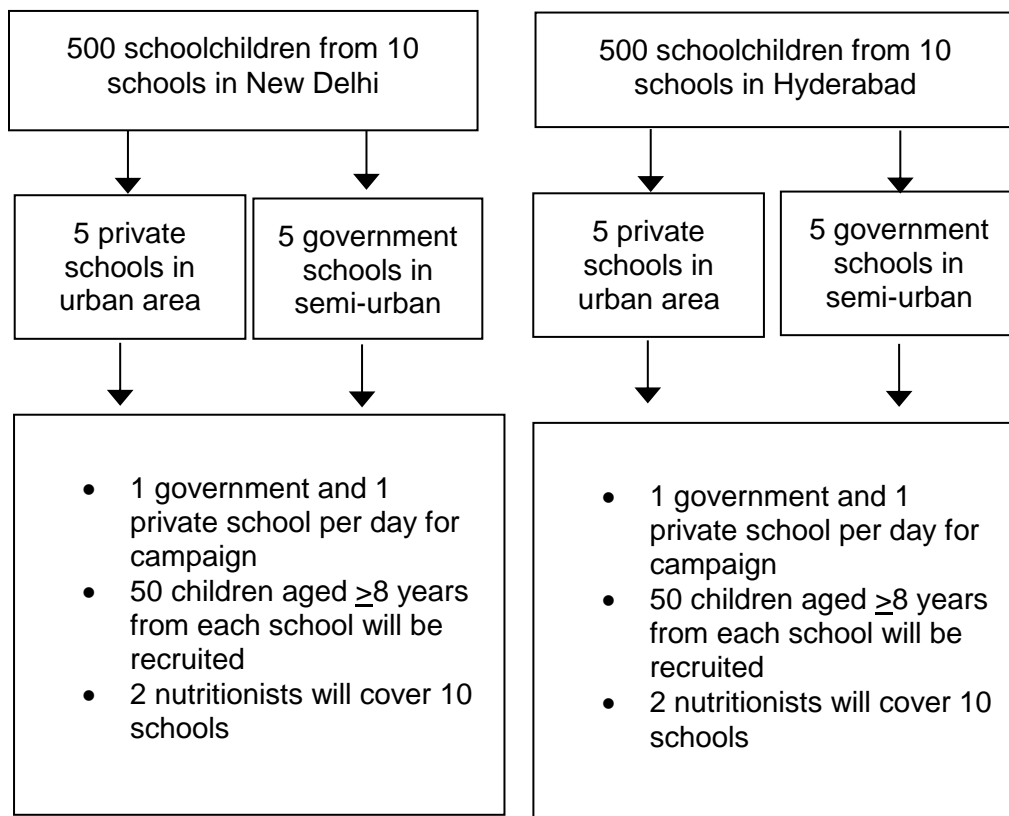


Figure 2. Selection process for recruitment of study participants

Sodium reduction education session: Three-hour educational session with schoolchildren will be provided in each school. The education sessions will be specific to limiting dietary sodium and was intended to change their eating behavior. The sessions will be interactive and cover health issues associated with excess dietary sodium intake, benefits of lowering sodium intake, identification of foods typically high and low in sodium, tips for lowering sodium content in their own diet and more.

Resource person:

Four trained nutritionist will be identified to deliver the salt awareness education to schoolchildren. Each nutritionist will undertake total 5 health education sessions covering 5 schools. The health education session will cover-

- About salt and sodium
- Fact sheet on salt reduction
- Health effects of a high-salt diet
- Benefits of lowering salt intake
- Alternatives to salt
- Cutting down processed foods
- Identification of foods with high and low in sodium
- How to follow a low Salt diet? Tips for lowering salt content
- How much salt? Recommended guidelines for salt intake
- How to read and interpret Nutrition Information Panel (NIP)
- Misconceptions regarding a low-salt diet

Monitoring & Evaluation: A survey at baseline and at the end of the campaign will be conducted among schoolchildren using a brief interviewer-administered questionnaire. This questionnaire is used to obtain demographic information, knowledge of health risks associated with dietary salt, attitudes and behaviour for salt intake. At the end of the campaign, the George Institute will produce an evaluation report of the awareness raising campaign.

Ethical approval: The ethics approval for the proposal will be sought from relevant ethics committee in the country.

VII. Activities and outputs

Activity	Output
Hire coordinators and nutritionist to develop, supervise, plan, coordinate with schools/working group and implement activities for the campaign.	Implementation work plan, and mechanisms are in place to ensure smooth and effective delivery of the project activities. 4 nutritionists are recruited and provide dietary advice to reduce sodium intake.
Identification of 20 schools (private as well as government run), seeking permission from the school authorities, signing of understanding. Project launch, involving key stakeholders.	20 schools, 1000 children on board; press coverage on the importance of salt reduction.
Development of health education and dietary advice material to reduce salt (sodium) intake, pre-test and printing etc.	Health education materials developed, pre-tested, produced and used/disseminated to schoolchildren.
Delivery salt reduction education sessions to schoolchildren.	Children learn health effects of excess sodium intake, importance of adherence to low-sodium diet and influence their health behavior.
Fun-filled activities at school to engage children on reducing salt intake.	1-2 activity organized in each school with children and their teachers.
Evaluating the impact of the campaign.	The survey report documenting a change in schoolchildren on targeted outcomes.
Project wrap-up & dissemination of results.	Publish and disseminate the project report through workshops/events/conferences. Publish papers in the academic/scientific journals about undertaken activities and findings from this study

VIII. Budget

The budget for proposed action, needs INR 27,85,000/-. Details are given in the annexure – 1.

IX. Impact

We believe that delivering health education lessons to children to reduce salt intake would thus help to reduce morbidity and mortality caused by excessive intakes of salt.

X. References

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