Design and test of an Intervention to change 5 food hygiene behaviours in Nepal

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1. Introduction

Food-borne diseases are a major cause of illness globally. Inadequate food hygiene probably causes a substantial proportion of gastro-enteric infections among infants and young children. One estimate has 70% of diarrhoea in developing countries caused by pathogens transmitted through food. Contaminated weaning foods are potentially a major contributor to childhood diarrhoea and may contribute to undernutrition. However, most of what is known about food-borne infections in low-income settings is based on expert opinion and biological plausibility only. Food hygiene has been neglected both in research and in programming. Simple, easily replicable and feasible food hygiene interventions are needed that can be implemented within Water, Sanitation and Hygiene (WASH), health, and nutrition programmes.

2. Objectives

- Design and implement a proof-of-principle food hygiene intervention targeting mothers with a child aged 6-59 months.
- Measure the effect of the intervention on food hygiene behaviours (primary outcome).
- Measure the effect of the intervention on microbiological contamination and diarrhoeal disease (secondary outcomes).

(Note: this poster only highlights the primary outcome of the trial)

3. Methods

Study setting: Kavre: rural hill district, Nepal.
Study duration: October 2012 to December 2013
3 months intervention May – August 2013.
Study design: Cluster randomized, before-after study with control clusters.
Study population: Households with child aged 6-59 months.

3.1 Study design:

Cluster randomisation. Before-after study with control clusters.

3.2 Study population:

Households with child aged 6-59 months.

4. Intervention Design:

4.1 Package development: A simple and scalable food hygiene behaviour change package was designed using Evo-Eco theory of behaviour change on the basis of detailed formative research and prototyping.

4.2 Positioning and branding:

The intervention had a consistent brand, the ‘Ideal Mother’ concept, with the strapline ‘Safe Food, Healthy Child’.

4.3 Intervention delivery:

15 trained community health volunteers delivered six community/group events followed by six HH visits over three months.

5. Results

5.1 Behaviour change principles:

Each event was designed around a specific motivational theme such as ‘Nurture’, ‘Disgust’, ‘Social Respect’ and ‘Affiliation’. The campaign also changed the physical, biological and social settings of the kitchen.

5.2 Key results:

Significant improvements in targeted behaviours indicate that, it is possible to change multiple food hygiene behaviours employing emotional motivators. Our next step is to refine the package and test whether it can be as successful at large scale.

6. Discussion and Conclusions

The results show that the intervention was effective in achieving an increased prevalence of food hygiene behaviours in the intervention arm (43% vs. 1%). Key behaviours were more common in intervention than in the control arm (43% vs. 2%, p<0.001). The intervention appeared to be equally effective in improving all five behaviours and in all clusters with few variations. The campaign utilized modern behaviour change science moving away from standard educational approaches. Campaign activities such as changing kitchen settings, use of emotional drivers, eye danglers, and engaging events such as games, competitions (i.e. ‘clean kitchen’, ‘ideal mother’, ‘safe food hygiene zone’), encouraged mothers to adopt and practice five key food hygiene behaviours.

Significant improvements in targeted behaviours indicate that it is possible to change multiple food hygiene behaviours employing emotional motivators. Our next step is to refine the package and test whether it can be as successful at large scale.

References:

- Sorensen SA. Food contamination and diarrhea. WHO. January 1993.12:1-3