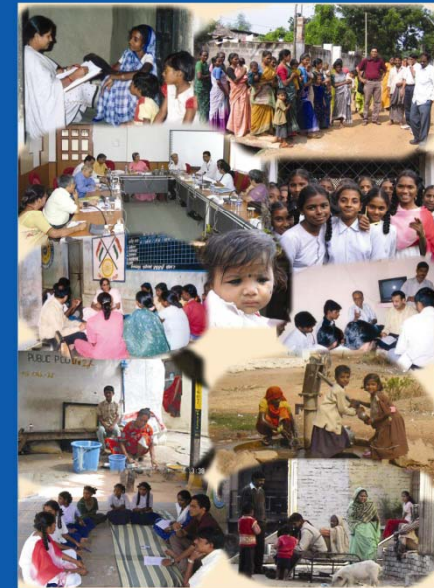


Food safety awareness, practices and enabling assets in India – A nation-wide needs assessment study

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Introduction



- It is the basic human right to have access to food that is not only nutritionally adequate but also safe to consume (FAO, 1997).
- Food safety is therefore a public health priority
- Governments all over the world are intensifying their efforts to improve food safety
- Unlike in the west, we procure raw agricultural produce or semi-processed foods and further process at home (Achaya, 1994).
- Hence household food safety is priority in our context





- A significant proportion of food borne illnesses arise from practices in the home kitchen
- the role of home food preparers in ensuring food safety becomes important
- Throughout the world, women are the ones who most often produce, purchase, handle, prepare and serve food for the family.
- They are the principal guarantors of food safety and quality of food at household level (FAO, 1997).



OBJECTIVES



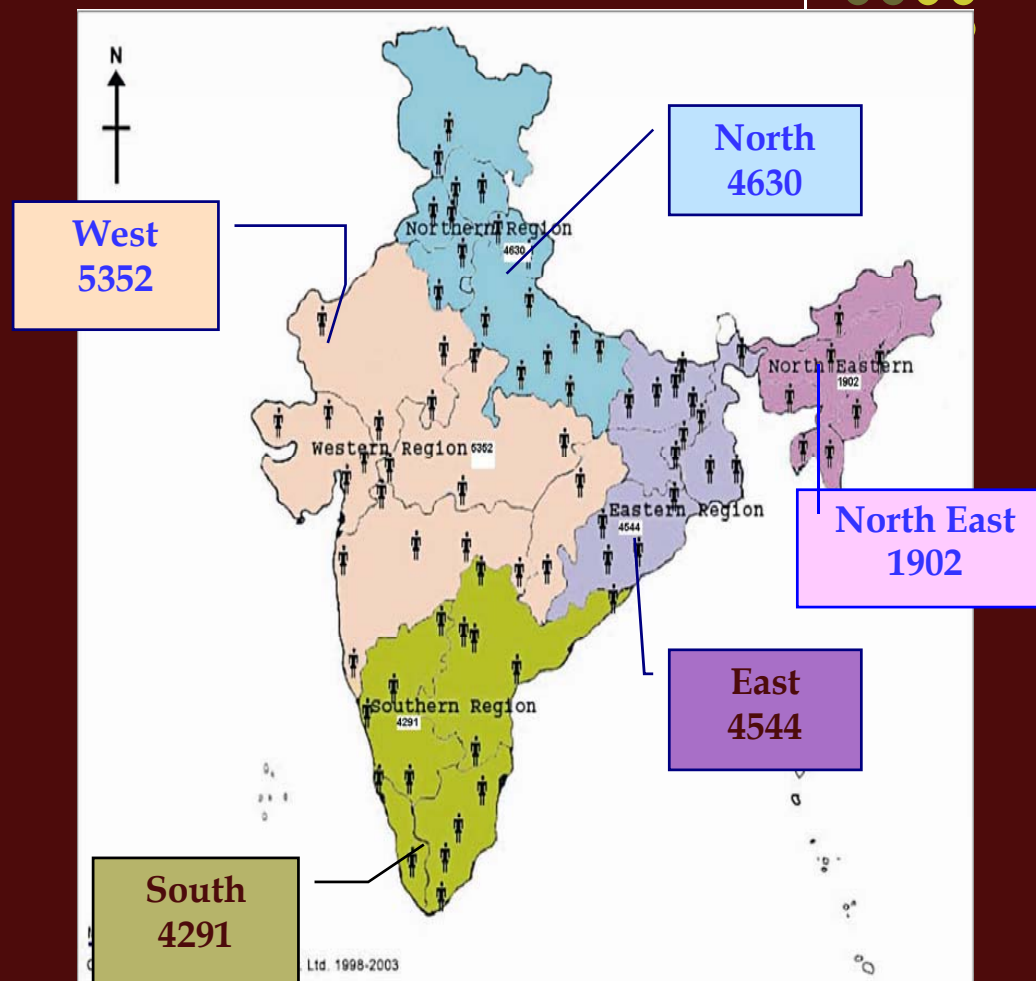
1. Undertaking household survey to establish baseline indicators of awareness, attitude and practices related to food safety among Indian population
2. Triangulate this data with qualitative data obtained from other stake holders



MATERIALS & METHODS



- Multi-stage stratified, proportional random sample
- 20, 719 households (HHs)
- 82 districts of 28 states from five regions
- 284 FGDs (U5 Mothers and Adol. Girls)
- 1372 In-depth interviews



REGIONAL INSTITUTES

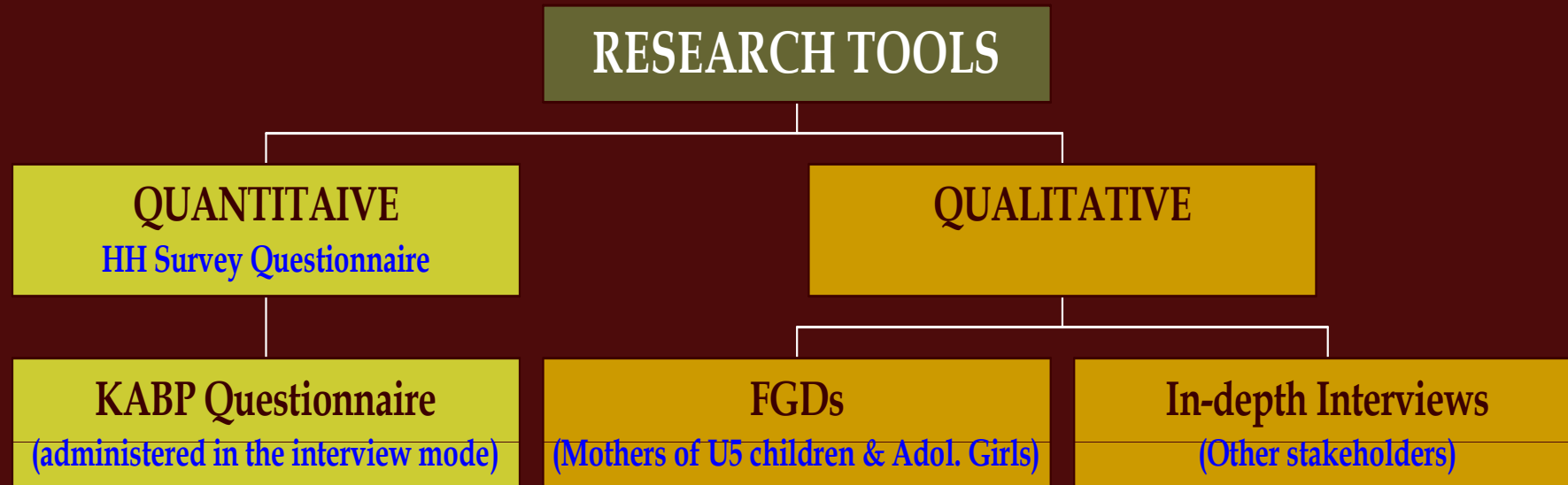


Name of the Regional Institute	States Allocated
All India Institute of Hygiene and Public Health, Kolkata	West Bengal, Bihar, Orissa, North Eastern States , Jharkhand
Tata Institute of Social Sciences, Mumbai	Maharashtra, Gujarat, Goa, Rajasthan, Madhya Pradesh, Chattisgarh
National Institute of Nutrition, Hyderabad	Kerala, Karnataka, Tamil Nadu, Andhra Pradesh
Lady Irwin College, New Delhi	Delhi, Uttar Pradesh, Uttaranchal
All India Institute of Medical Sciences, New Delhi	Jammu and Kashmir, Himachal Pradesh, Punjab and Haryana



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... Materials & Methods (Contd.)



Materials and Methods



KABP Questionnaire	FGD themes
<p><u>58 closed-ended questions</u></p> <ul style="list-style-type: none">• Demographic details• Location of kitchen• Personal hygiene• Handling drinking water, cooked food, fruits and vegetables, non-vegetarian food, milk• Child feeding practices• Incidence of food and water borne diseases• Food labels• Preferred media of information, education and communication	<ul style="list-style-type: none">• Concept of safe food• Qualities/indicators of safe food• Measures taken to ensure food safety• Common adulterants• Quality parameters when buying food from outside• Effectiveness of government in curbing food adulteration and food poisoning





ASSETS



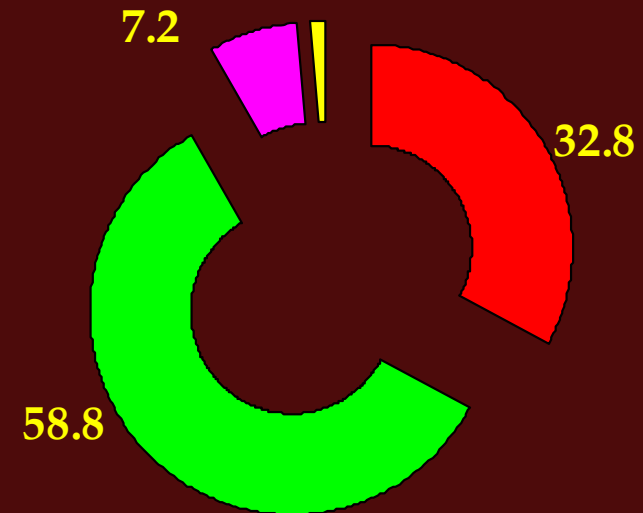
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ASSETS



- Use solid fuels (about 76%)
- Most of them (60%) Houses do not have separate kitchens
- Tap water is accessible to only 32.8% of HHs
- Refrigerators are in only 9% of HHs

Sources of Drinking water - National average



Protected water
Surface water

Ground water
Others

Despite all these odds
how are HHs ensuring
reasonable food
safety?





PRACTICES



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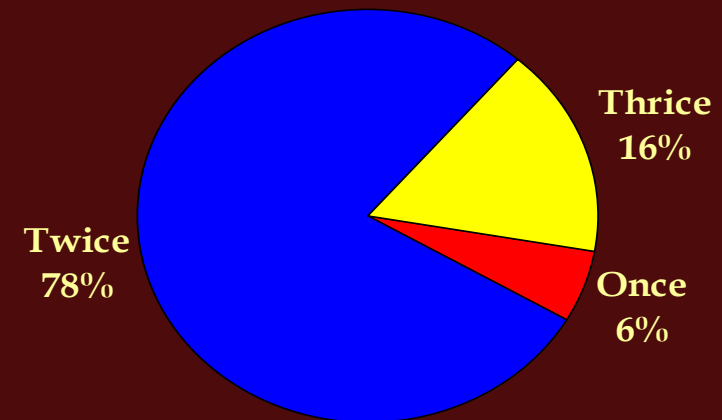
PRACTICES



Cooking/Storage of food

- Majority (78%) Cook food twice a day
- Over 54% of HHs serve hot food
- Most families store left over food (86%) in covered containers (99%)
- Most of them (89%) leave stored food at room temperature
- Consume stored food the with next meal (67.8%)
- 21% consume stored food the next day

Distribution (%) of HHs based on number of times they cook food



Many of them reheat the food before consumption but the importance of thorough heating is hardly known.



PRACTICES (Contd...)



Hand washing practices

- Almost all respondents wash their hands before undertaking all activities pertaining to food handling viz., cooking of food (92%), serving (90%), eating (98%) and after eating (98%).
- A large proportion of mothers wash their hands before feeding the child (86%) or before taking drinking water out of stored container (71%).
- Almost all mothers (99%) wash their hands after defecation and cleaning the child's stools.

FGDs revealed that usage of soap is almost nil. They just wash hands sometimes with any water

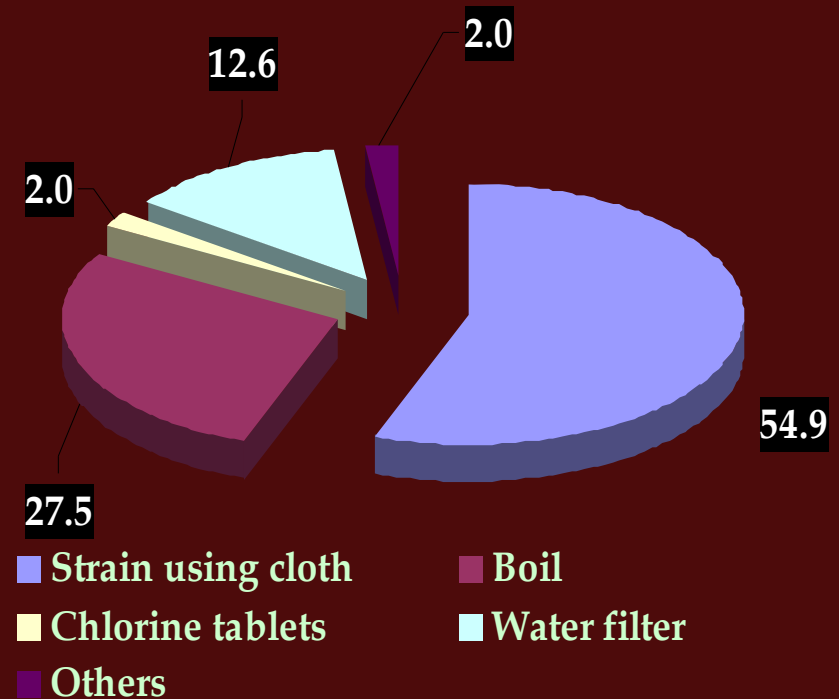


Water, milk and non-vegetarian foods



- 40% purify water at home using methods like straining through cloth (54.9%) and boiling (27.5%).
- A large proportion, boil the milk (72%) after procurement.
- Only 32% households store milk, of which 82% store it at room temperature.
- 64.1% families consume non-vegetarian foods with highest reported in Southern States (92.2%) and the least in North (40.4%).
- Leftover non-vegetarian food is stored at room temperature (51.2%).

Methods used by HHs for purifying drinking water



Washing vegetables and fruits



- Most respondents claimed to wash vegetables (86.8%) and fruits (75.7%) before cutting or peeling

FGDs revealed that some women were in the habit of cleaning them by dipping them in a container of water





AWARENESS



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AWARENESS

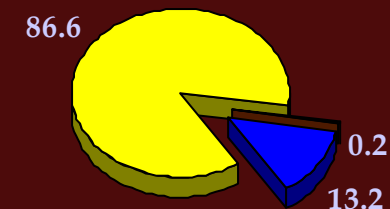


Food borne illnesses

- About 13.2% mothers could recollect that at least one of their family members had suffered from food borne illness(es) in the past couple of weeks.
- In contrast, only 3% mothers recollected food borne disease outbreaks in the village or community.
- Only 50% of the respondents associated diarrhoea or vomiting with FBD.
- 33-40% of HHs do not know whether these are symptoms of FBDs

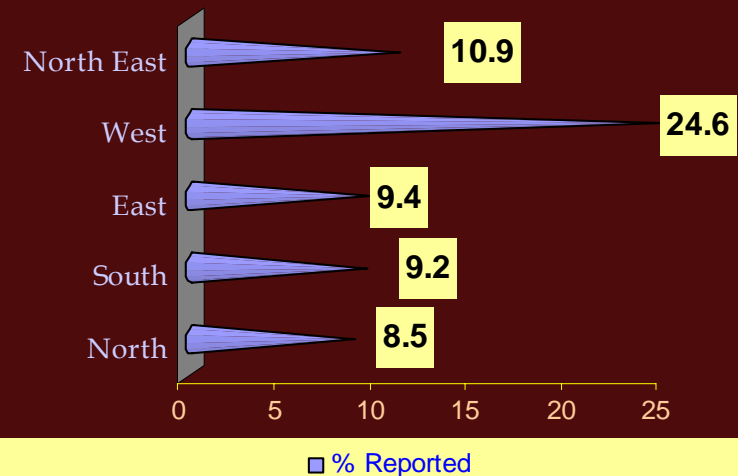
Knowledge on symptoms of food borne diseases is diverse and scanty

Food borne illnesses reported at HH level



■ Yes ■ No ■ No responses

Region-wise distribution of food borne illnesses reported at HH level



■ % Reported



Knowledge of food labels



- As regards the quality symbols on food labels, ISI is known to 77.8% of respondents, while AGMARK is known to more than half of them only 22% know FPO.
- Over 26% always check the list of ingredients on food labels while 43% check the same sometimes or rarely and 30.5% never check this information on the label.
- It is encouraging that over 75% of them all check the 'best before' date.



59.2% claim to buy packed foods. Only 21% of them look for the symbols on food labels.

54% do not know whom to complain in case of food adulteration and over 29% do not bother to complain.



Development of Scores



- In order to ascertain the most relevant questions of food safety to the prevalence of FBDs, statistical associations were made between various indicators and the prevalence of FBDs in all states.
- In this context, factors like living index, the number of times food is cooked, source of drinking water, method of water purification, method of washing hands and storing food were also considered totally leading to 46 indicators.
- These indicators were assigned scores to help us arrive at food safety scores – awareness, practices and enabling assets



Integrated Food Safety Scores (Mean)



Region	1. Enabling Assets	2. Food Safety Awareness	3. Food Safety Practices	Total Scores (1+2+3)
South	14.3	5.5	20.7	40.5
North	14.4	5.6	20.6	40.5
East	9.9	4.1	16.4	30.3
West	9.6	4.6	17.8	32.0
North East	14.5	4.1	24.4	43.0
All India pooled	12.1	4.8	19.3	36.3





Distribution (%) of association between diarrhoeal prevalence and integrated food score (in tertiles)

Reported prevalence of food borne disease		Total food score			Total
		Low (<30)	Medium (30-39)	High (>39)	
Yes	Number (%)	1111 (40.5)	850 (31.0)	780 (28.5)	2741 (100)
No	Number (%)	5825 (32.5)	6009 (33.5)	6103 (34.0)	17937 (100)

*Parenthesis indicates %
 $\chi^2 = 72.6$ ($P < 0.01$)*



Conclusions and Recommendations



- Most of their day-to-day food safety practices are innate cultural practices imbibed through generations.
- Such practices can be strengthened if women are made aware of the scientific rationale behind them.
-
- The 13.2% of food borne illnesses reported at HH level are as much attributable to lack of enabling environment as much to the lack of food safety awareness.
- Providing enabling environment for food safety is essential





- Empower women with food safety education to enable them to make informed choices
- The study also revealed that the *Anganwadi Workers* were the preferred source for food safety education. Need to equip this women workforce to spread the knowledge
- Women hold the key to ensuring food safety to all provided they are empowered with enabling environment and supported by sound awareness creation endeavours.
- Investing in food safety education for them is an essential and wise investment in 'human capital'.





Thank you for your attention



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