

# Perceptions of women on food safety – A case study in Hyderabad, India

## INVESTIGATORS

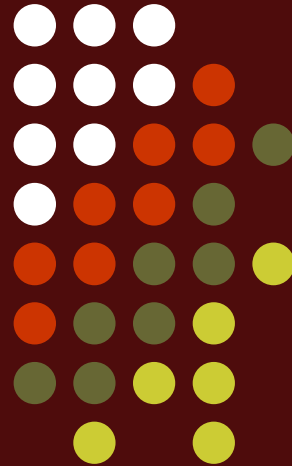
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# Introduction



- **Food safety - a global issue with public health implications and international trade Increase in the number of food borne illnesses**
- **Governments are intensifying efforts to improve food safety**
- **Difficult to estimate global incidence of food borne illnesses**
- **2.1 million deaths due to diarrhoeal diseases in 2000 alone**
- **Many of these attributed to food and water contamination**



# Surveillance of food borne disease outbreaks



- Surveillance of food borne disease outbreaks are fairly well established in developed countries
- Even then, only about 10% of actual cases in industrialized countries are recorded in official statistics.
- In case of developing countries it could be even less than 1% (WHO, 1990).
- In India, such surveillance of food borne disease is poor and official statistics do not accord any special position to food borne diseases (HSI, 1991).



# Food Borne illnesses in India



- Infants and children are affected most by food borne illnesses
- In India, about 400,000 children (<5 years) die every year due to diarrhoea. Many more suffer from Hepatitis A, enteric fever etc. caused by poor hygiene and unsafe food/drinking water (UNICEF, 2004).
- Studies (Bryan 1998; Scott *et al.*,1982, Scott, 1996) indicate that many food borne illnesses arise from practices in home kitchen (Surujlal and Badrie, 2004).
- Food handlers (usually mothers) play a role in ensuring food safety for children.
- This study attempted to assess perceptions and practices of mothers of children (<5 years) on food safety.
- Such data on KABP can help in developing appropriate IEC strategies

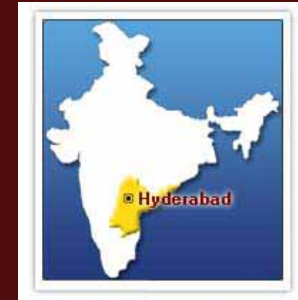


# Materials & Methods

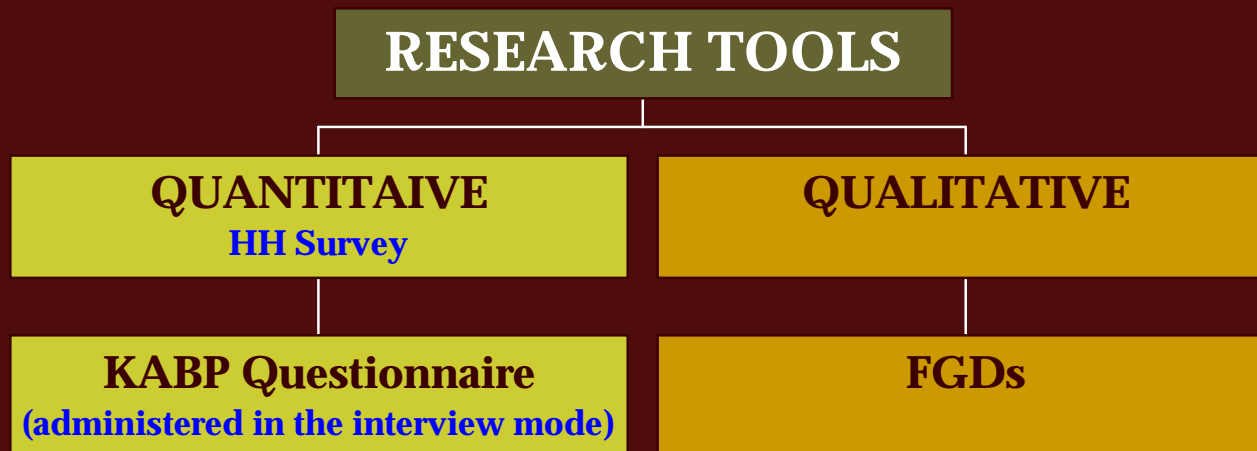


## *Study Setting & respondents*

- Slums of the city of Hyderabad in India.
- The City was divided into three geographical zones.
- Nine slums (three each from each zone) were randomly selected.
- Household survey carried out among 95 women (mothers of U5 children).



# ... Materials & Methods (Contd.)



# Materials and Methods



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



# ... Materials & Methods



## *Analysis*

Data from HH survey

- The data were coded and statistical analysis was done using SPSS package (version -11.5).

Data from FGDs

- Recorded discussions were transcribed on the same day, using notes taken by observer to supplement audio recordings.
- Local language (Telugu) script was translated into English, and each transcript was coded into issues based on the theme guide.
- The transcribed /transliterated scripts were compiled into individual reports by including suitable quotes.
- All the individual reports were in turn compiled into a report, putting similar findings together.
- These reports were read independently by a group of researchers who agreed on the interpretation.

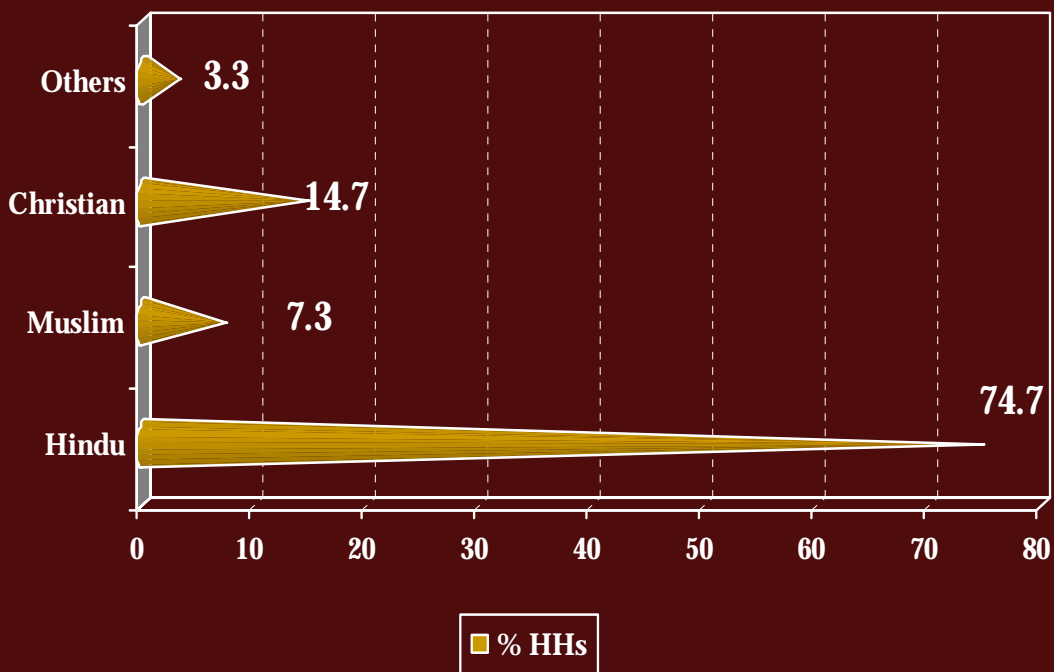




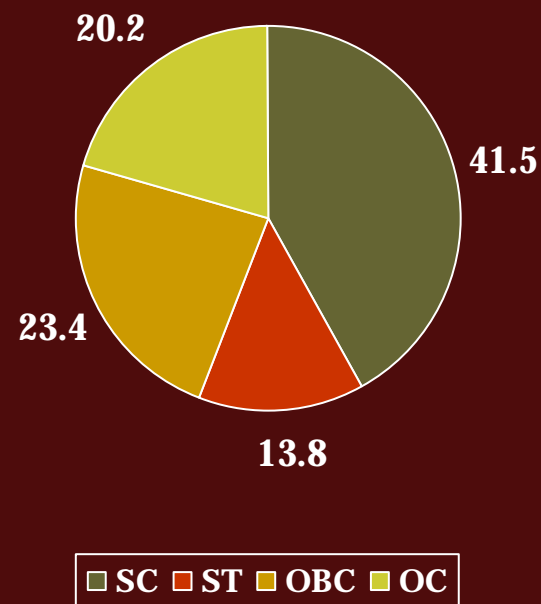
# Socio-economic characteristics of respondents



## Religion



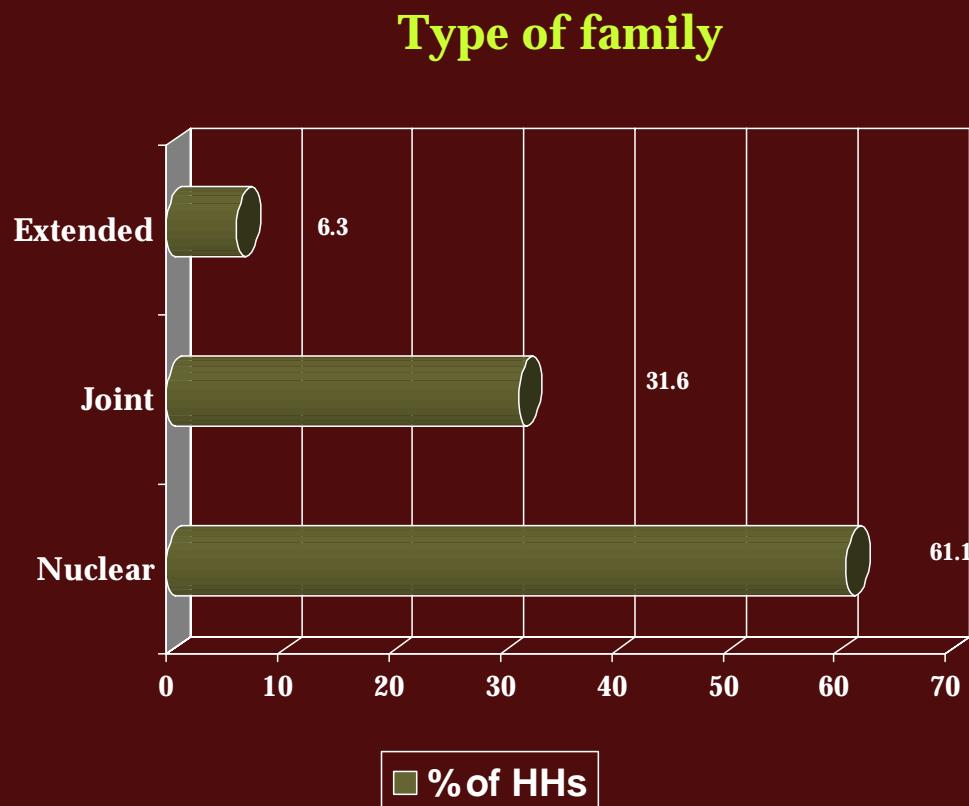
## Caste



# Socio-economic characteristics of respondents

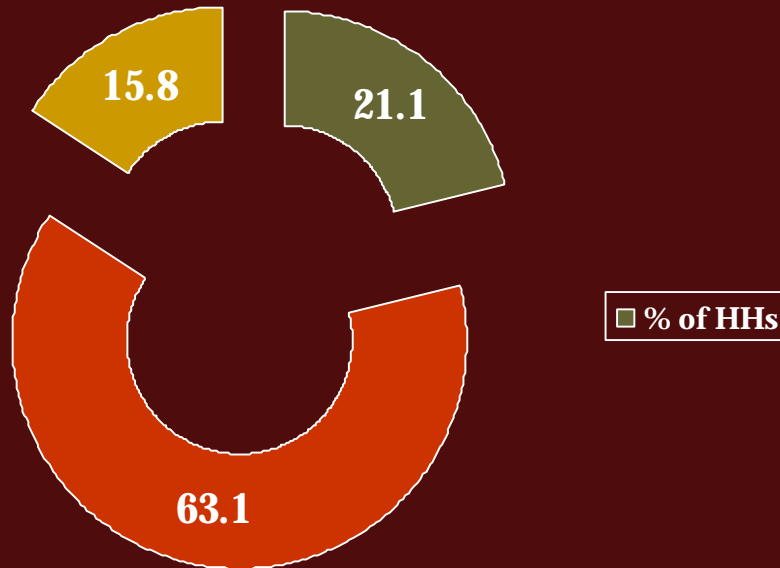


Occupation	% of HHs
Landless Ag. Laborers	7.4
Other Laborers	6.3
Business	5.3
Others	27.4
Housewives	53.7



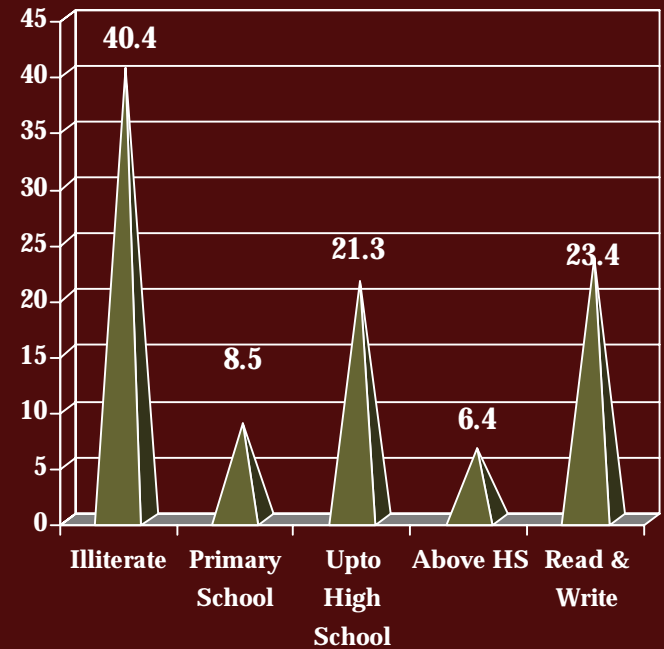


# Type of House

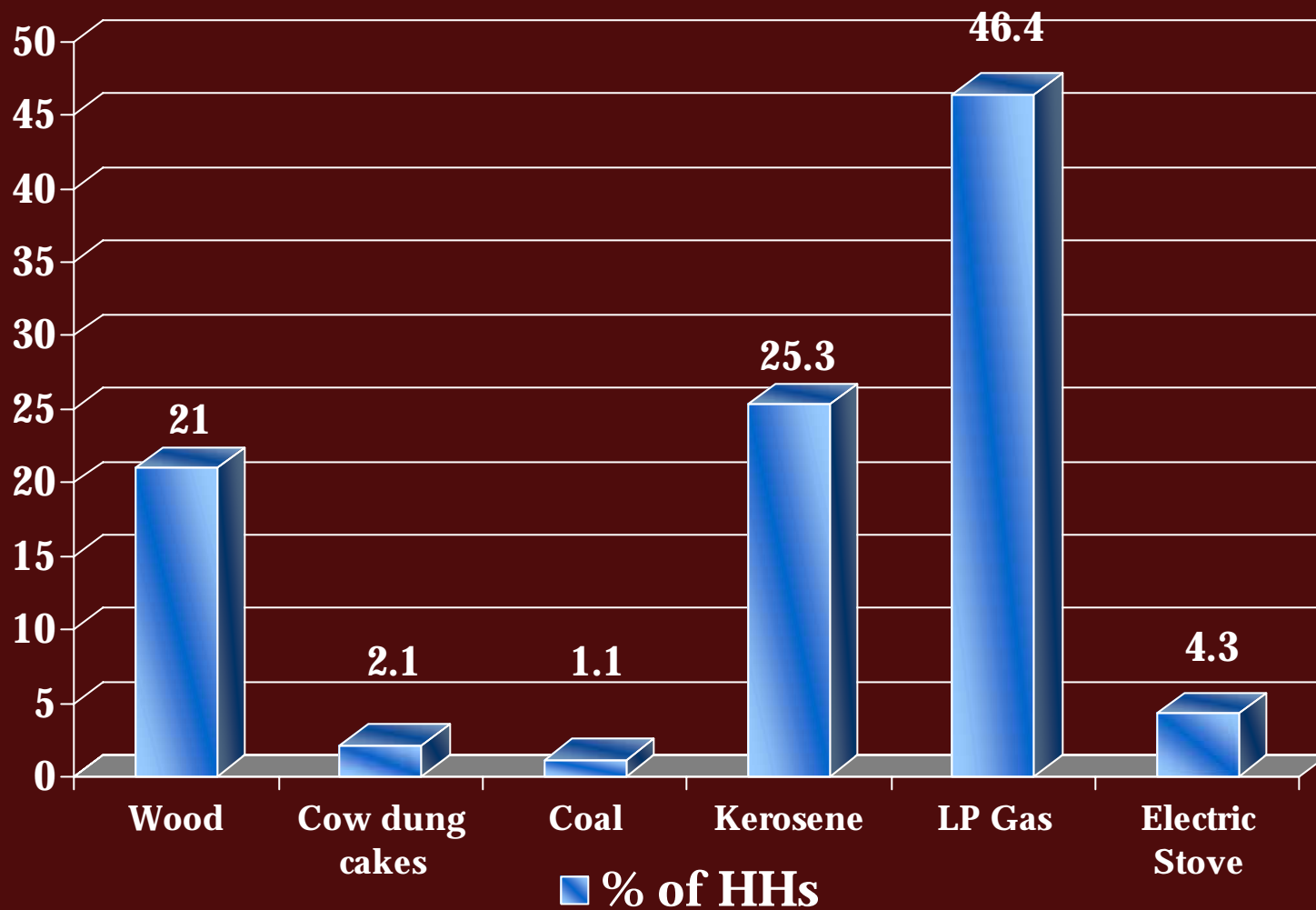


■ Pucca ■ Semi-pucca ■ Kuccha

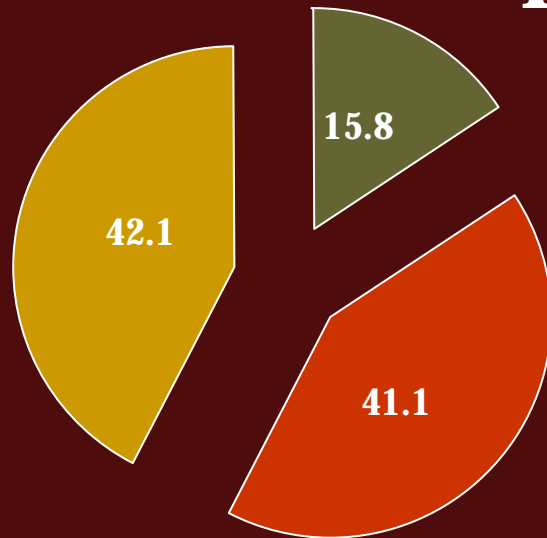
# Education



# Type of fuel used for cooking



# Placement of Kitchen



■ Specific Open Verandah   ■ Separate Kitchen   ■ Common Place

## Cooking food

- 90% of the respondents themselves cook food at home

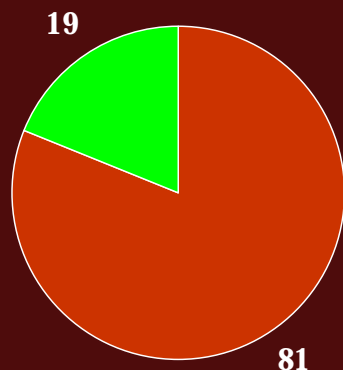


# Washing Hands



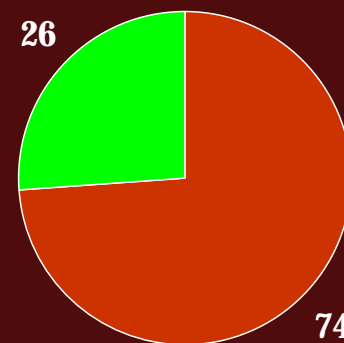
- 90% wash hands before eating, serving and cooking food, before feeding the child and drawing water from pot.

Washing hands before eating / serving/cooking



■ Only with water    ■ Using soap

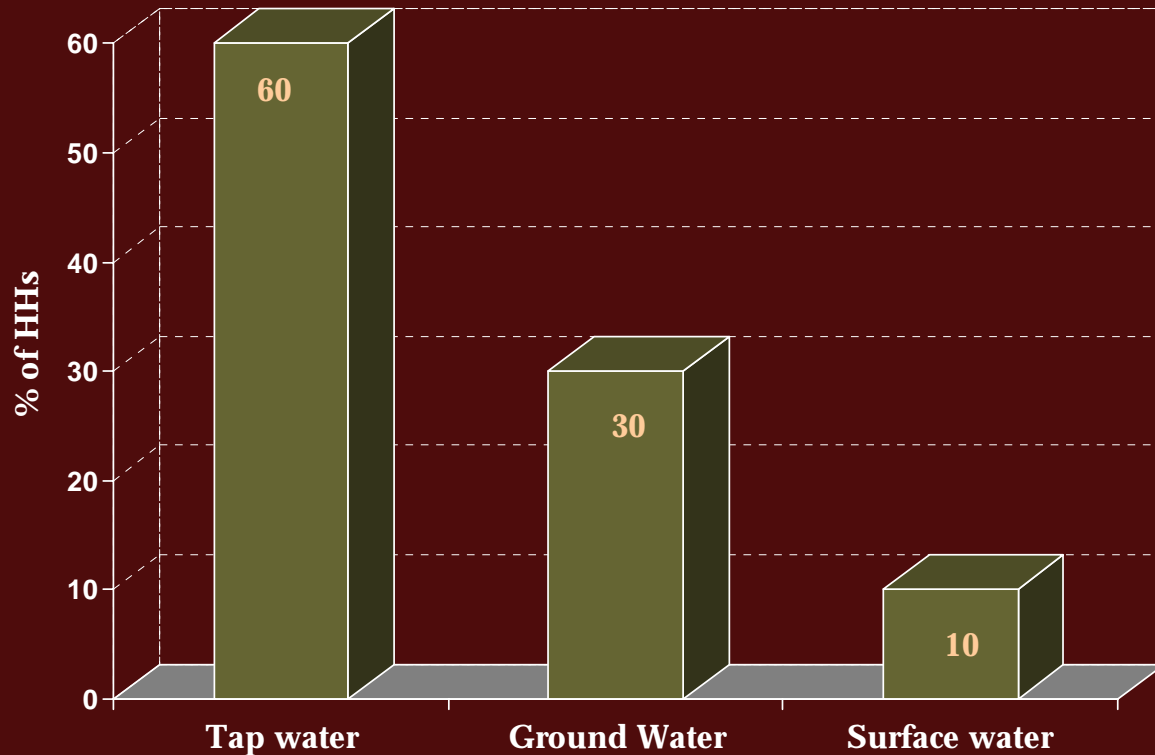
Washing hands after defecation



■ Only with water    ■ Using soap



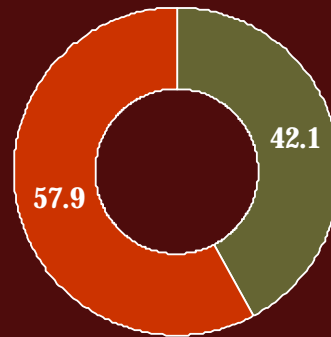
# Sources of drinking water



# Purifying water for drinking



■ Purify      ■ Do not purify



Method of Purification	% of HHs
Straining with cloth	30.8
Boiling	35.9
Water filter	30.8
Others	2.6





# Cooked foods



- **Over 85% cook twice /day, 7.4% cook thrice and 6.3% only once**
- **About 74% store cooked food and most of them (80%) store at room temperature**
- **Only 14.3% store it refrigerators, 4.3% in water and 1.4 % use other methods (like wrapping container with wet cloth)**
- **Over 53% eat the leftover food with next meal, 20% eat it next day, 24.3% convert it into other foods, while 3% give away to others**



# Milk



- About 95% procure milk.
- Nearly 92% boil immediately after procuring it and 6% boil before use.

## Non-vegetarian Foods

- About 94% consume non-veg foods.
- 85% of them are in the habit of storing leftover cooked non-veg. foods.
- Nearly 68% store it at room temperature, 14% in refrigerators and 2.1% use other methods.



# Vegetables & Fruits



- Nearly 57% consume raw vegetables and 41.1% don't
- 10% do not wash the vegetables before cutting or peeling and 17.9% do not wash usually wash fruits before eating
- Of the 89% who wash vegetables, only 77.4% use drinking water for washing
- Similarly, of those who wash fruits, only 80.3% use drinking water



# Child feeding practices



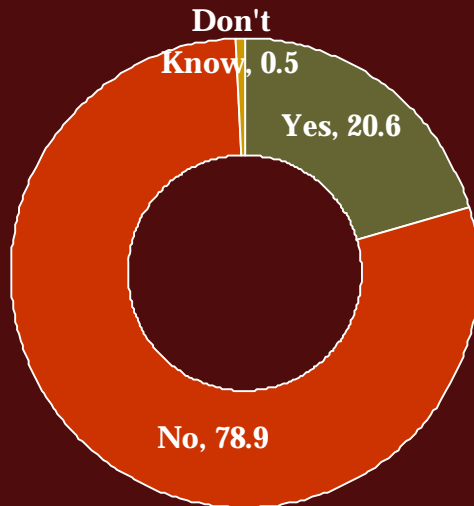
- Of all the respondents only about 26% bottle feed/ever bottle fed their child
- Of them, a quarter wash the bottles once a day, 29.2% wash twice and 42% after each feed
- About 13% wash the bottles only with water, while 42% boil it in water and equal number wash the bottles with soap.



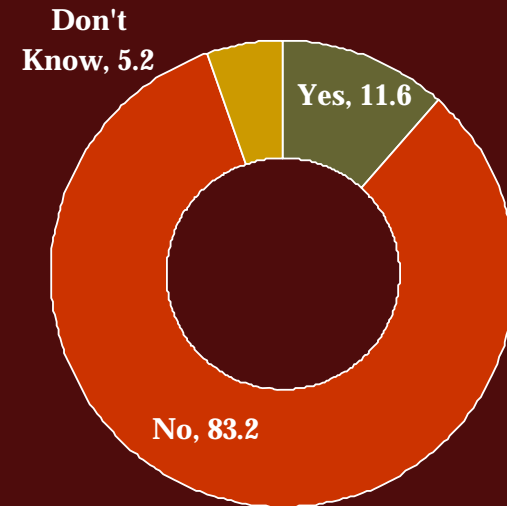
# Food / Water borne diseases



Reported episode(s) at HH level (%)



Reported episode(s) at community level (%)



- Of them 11% did not complain, 27.8% said they complained to authorities and the rest did not know what to do
- In most cases contaminated water was the reason.



# Knowledge of food borne illnesses



- Of all the respondents, only 19% consider diarrhea as a symptom of food borne illnesses, 32.6% consider vomiting, 11.6% consider nausea and 20% think abdomen pain are symptoms of food poisoning
- Nearly half of them all do not consider any of the above as symptoms of food borne illnesses



## Food labels

123456F



Though 48% buy packed foods, a majority (78%) do not recognize symbols on food labels.



# From FGDs...



- Not more than 10 women in each group
- They were in the age group of 18-26 years.
- Two groups (New City and Secuderabad) were selected with the help of local Anganwadi Workers while the other group was selected with the help of local NGO.
- The women were gathered in a local community centre and were seated in a semi-circle with the moderator in the centre.
- All the women were housewives and most of them came along with their children.
- Most of them were enthusiastic and expressed their views.
- The background and the objectives of were explained and the discussions were audio recorded with their permission



# Concept of safe food



Majority of women feel that food prepared in clean utensils maintaining personal hygiene after washing vegetables, served hot, prepared and served by keeping the house clean is safe.

*“Preparing the food hot and eating it immediately is safe.”*

- Shehnaaz, 21, Old City

*“Washing of vegetables, windows in kitchen, Chula (stove), spoons, knife, and cutting boards is more important.”*

- Pavani, 27, Secunderabad

*“Keeping the house clean and keeping ourselves clean is the basis for preparation of safe food”.*

- Nalini, 26, Old City

*“Only if there is an urgency, we cook before bathing otherwise we usually take bath before cooking”*

- Meenakshi & Radhika, New City





# Quality indicators of safe food



Most of the women cook and consume fresh food. Some in new city and Secunderabad were in the habit of keeping left-over food in refrigerators. The others usually leave at room temperature. Just before consumption, they examine the food and if it is 'good' then they consume or else discard it.

*“We cook required amount of food and eat it when it is hot as we have no refrigerators at home”*

- Khaza Sultana, 24, Tailor, Old city

*“Although we prepare food with clean hands and under hygienic conditions there is a possibility of contamination by flies if it is not kept covered with lids”.*

- Hazeera, 23, Women Group Member, Old City



## When asked about what they consider when buying food from outside

*“We seldom take outside food. Just for change of taste. I think it is usually not prepared in a hygienic environment, and the people who serve the food don't maintain personal hygiene”.*

- Majority of women in all 3 groups

*“Sometimes it might be a compulsion to depend on the outside food especially in cases when any of the family members is admitted to hospital or when we are traveling.”*

- Shehnaaz, 21, Old City

- They consider freshness of fruit and vegetables before buying them
- Cleanliness of eatery and personal hygiene of the handler is taken into consideration when buying food in hotels or on street sides



# Measures taken to ensure food safety



- Almost all of them wash hands before cooking, serving and eating food.
- Food is kept in covered containers
- Served hot.
- Stored food is least preferred
- They procure fresh vegetables and fruit

*“I wash the vegetables bought from the market as soon as they brought home and keep them in a wet cloth”.*

**- Pentamma, 45, New City**

*“ We usually buy fresh vegetables ”.*

**\_ Radhika, 32, Secunderabad**



# Common adulterants



- There was a perception among many women that food stuffs sold loose and unpacked are usually adulterated
- Commonly adulterated foodstuffs were
  - Chilli powder with wood powder
  - Ginger & Garlic paste with onion paste and potato paste
  - Bengal gram flour with other flours
  - *Garam masala* powder with low quality ingredients
  - Milk with water
  - Costly oils with cheap variety oils

***“By tasting, smelling and feeling the product one can know whether the product is adulterated or not”.***

- Nasreen Sultana, 29, Women Group Member, Old City



# Adulteration



- Very few women checked labels, though most of them checked 'best before dates' when buying packed foods
- 'ISI' label was known to some of them, while the other labels were usually not known
- They usually return the adulterated foods to the vendor and take something else in exchange
- They are not aware where to complain



# Effectiveness of government in curbing food adulteration and poisoning



- Most of them ridiculed the government fair price shops where they say adulterated stuff is sold.
- They thought the Govt. machinery was not effective
- There were a few opposite views too

*“In fair price shops (Public Distribution System) , we are don’t get measures, and rice and oil are adulterated or of poor quality. We feel the government is not keeping a strict vigil !”*

- Balamani, 36, New City

*“How will Government know about adulteration which is done by the people secretly in their shops?”*

- Nalini, 26, Old City



# Discussion



- A significant proportion ( $p < 0.05$ ) of literate mothers wash hands with soap
- Significant ( $p < 0.05$ ) association between literacy and habit of purifying drinking water by boiling
- Food safety score is significantly ( $p < 0.05$ ) associated to living index – Better the SLI, better the food safety awareness/practices
- Inverse association between literacy of the women and incidence of diarrhoea



# Conclusions



- **Women in general seem to be aware of food safety issues**
- **Most of their safe food handling practices are imbibed in their culture**
- **However, usage of soap for washing hands is abysmally low**
- **The incidence of food borne diseases (20% at home level and 12% at community level) are more attributed to water contamination**
- **Access to pure water is more associated with economic status of the respondents.**
- **As regards, child feeding practices, though bottle feeding is very low, methods used for washing milk bottles are diverse**
- **Knowledge of food labels is very low.**
- **Most of them do not know where to complain if the food is adulterated**
- **They don't consider Government machinery effective enough to curb adulteration.**







*Thank you  
for  
your attention*



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