Gender-sensitive participatory risk assessment for food safety

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A4NH/IFPRI Gender Seminar: Gender, Agriculture, and Health: Tracing the Links
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Food safety

- Every year, at least 2 billion cases of diarrhea occur and 1.5 million children under 5 yrs die worldwide.

- 80% of child deaths due to diarrhea occur in South Asia and Africa.

- Animal source foods are single most important source of food borne disease (FBD).

- In Africa and Asia, large proportion of animal source foods are sold through informal markets.
Risk analysis components

Risk Assessment

Risk Management

Risk Communication
Codex Alimentarius Commission framework for food safety risk assessment

Hazard identification
- Can it be present in food?
- Can it cause harm?

Hazard characterization
- What harm does it cause?
- How does harm depend on dose?

Exposure assessment
- How and to what extent does it get from source to victim?

Risk characterization
- What is the harm?
- What is its likelihood?

Risk communication

Participatory methods fit well
Main tools

Mapping: geography, movement, institutions...

Drawing: calendars, time-tables, diseases symptoms

Categorising: Brainstorming, Matrices

Ranking & rating: pair-wise comparisons

Proportional piling: estimating proportions

Direct observation: transect, village walk

Discussion: group, sub-group, key informant interview
Risk assessment & management with a gender perspective

- How do the differing roles of women and men affect their exposure to hazards?
- How does the biology of women and men, young and old, healthy and sick affect their vulnerability to different diseases?
- As food systems undergo change and evolution, how might this advantage or disadvantage women and men?
- How do women and men differ in their capacity to manage risk and how can we best enhance risk management?
Availability: seasonal

- School fees
- Festivals
- Rains

Consumption

Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec

- Rural-rural
- Rural-urban
- Urban-urban
Availability pork: rural consumers in Uganda

- Butchery wa Anthony:
  - Clean meat and clean butcher man
  - Organized place
  - Not a pork joint
  - Fair price (6,000 UGX per kg)

- Butchery Mukono:
  - Along the main way
  - Clean meat and butcher man
  - Organized
  - Not a pork joint
  - Fair price (6,000 kg UGX per kg)

- Butchery/pork joint Nasuti:
  - Relative clean
  - Good price
  - Near

- Butchery/pork joint Nakabago:
  - Relative clean
  - Good price
  - Near

- Butchery/pork joint industrial area:
  - Relative clean
  - Good price
  - Near

- Butchery Mukilangila:
  - Dirty meat, dirty butcher man
  - Drunkards that maintain obscene words

Kitete, Mukono TC
### Acceptability: nutritious vs delicious pig parts

<table>
<thead>
<tr>
<th>More nutritious</th>
<th>More delicious</th>
<th>Less delicious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loin, ham, hock, spare ribs, heart</td>
<td>Brain</td>
<td></td>
</tr>
<tr>
<td>Belly slice, rib toast, stomach,</td>
<td>Bones, intestines, liver, skull, tail</td>
<td></td>
</tr>
</tbody>
</table>

How often do you buy these?
- Two days out of three
- One day out of three
- One day a month
- Less than one day a month
Religion:
• Muslims; SDA; Borne Again (Masaka): “pigs are for demons”
• Abaswezi don’t eat eggplant, fish and pork
• Abaana don’t eat pork
• Bamasiya don’t eat anything that produces blood

Beliefs:
• Pregnant women must not eat pork or “the child might have a mouth like a pig”
• If children eat meat “they might delay speaking”
• If children eat offal “they might become dumb”

<table>
<thead>
<tr>
<th>Pregnant women avoid</th>
<th>R</th>
<th>U</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intestines</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Head meat</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Spicy food</td>
<td>√</td>
<td>〇</td>
</tr>
<tr>
<td>Fishy food</td>
<td>〇</td>
<td>√</td>
</tr>
<tr>
<td>Dog meat</td>
<td>√</td>
<td>〇</td>
</tr>
<tr>
<td>“Nem chua”-fermented pork</td>
<td>〇</td>
<td>√</td>
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<tr>
<td>Boiled pork with fresh fig leaves</td>
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<td>〇</td>
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</tbody>
</table>
When disease targets women

- High rates of abortion among women in some areas
- Listeria never reported in food
- Listeria reported in sheep
- First study to assess risk of Listeria in Ghana

Hazard: Listeria in milk
- Low risk

Hazard: Listeria in fish
- Moderate risk
Women dominate certain sectors

<table>
<thead>
<tr>
<th>Milk (cow)</th>
<th>Milk (goat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production: men (x Nairobi)</td>
<td>Production: men (w milk)</td>
</tr>
<tr>
<td>Processing: women</td>
<td>Processing: women</td>
</tr>
<tr>
<td>Marketing: women (x Abidjan)</td>
<td>Marketing: women</td>
</tr>
<tr>
<td>Consumed: both</td>
<td>Consumed: both</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Beef</th>
<th>Poultry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production: men</td>
<td>Production: women</td>
</tr>
<tr>
<td>Processing: men</td>
<td>Processing: women</td>
</tr>
<tr>
<td>Marketing: men</td>
<td>Marketing: women</td>
</tr>
<tr>
<td>Consumed: both</td>
<td>Consumed: both</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Pigs</th>
<th>Fish, crabs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production: women</td>
<td>Fishing: men</td>
</tr>
<tr>
<td>Processing: men</td>
<td>Processing: women</td>
</tr>
<tr>
<td>Marketing: men</td>
<td>Marketing: women</td>
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<tr>
<td>Consumed: both</td>
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New markets change opportunity and risk

Traditionally women control sale & processing of milk

**Abijan**: new urban markets
Markets self-organising
Producers immigrants: mainly men & unmarried
Men dominate milk value chain

**Mali**: new co-operative expands markets
Co-operative trains women
Women remain in market

Cooperative introduces quality tests
Some milk fails tests
Women take it home and consume
Family health at risk

Women have markets for milk
Less milk goes to herder
Nutrition status at risk
Women are fewer but better butchers

Women have a more important role in self-organised groups than officially-organised groups.

Women better meat handling practice and better quality meat ($p=0.001$).

Men eat more muscle meat (steak) and women more offal ($p=0.004$).

Peer to peer training resulted in:

- a 20% reduction in unacceptable meat
- $9$ per butcher and saved $780$ saved in diarrhoea treatment costs
Risk assessment & management with a gender perspective

- Differing roles of women and men significantly affect their exposure to hazards.
- Biology of women and men, young and old, healthy and sick affects their vulnerability but gender > biology.
- As food systems undergo change and evolution they tended to disadvantage women unless action taken.
- Women may be better at managing food safety risks than men.
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