

# "Our food may not be very safe because now days everything uses chemicals:" Women's Perceptions of Food Safety and Nutrition in Phnom Penh, Cambodia

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# Introduction

- One-third of children in Cambodia are stunted as a result of chronic malnutrition in early childhood  $^{1,2,3}$ .
- Most Cambodians get their animal source food (ASF) products, which are an important part of the local cuisine, from informal "wet" markets, where the many foodborne disease outbreaks are believed to begin<sup>4</sup>.
- The International Livestock Research Institute proposes to introduce a market-based intervention to reduce incidence of foodborne disease from animal source food products.

# **Objectives**

- Determine women's perceptions of the risk of food safety and how it relates to diet and health.
- Identify barriers preventing children and mothers from accessing safe animal sourced food products.



"That one is important. Because we were having meal together."

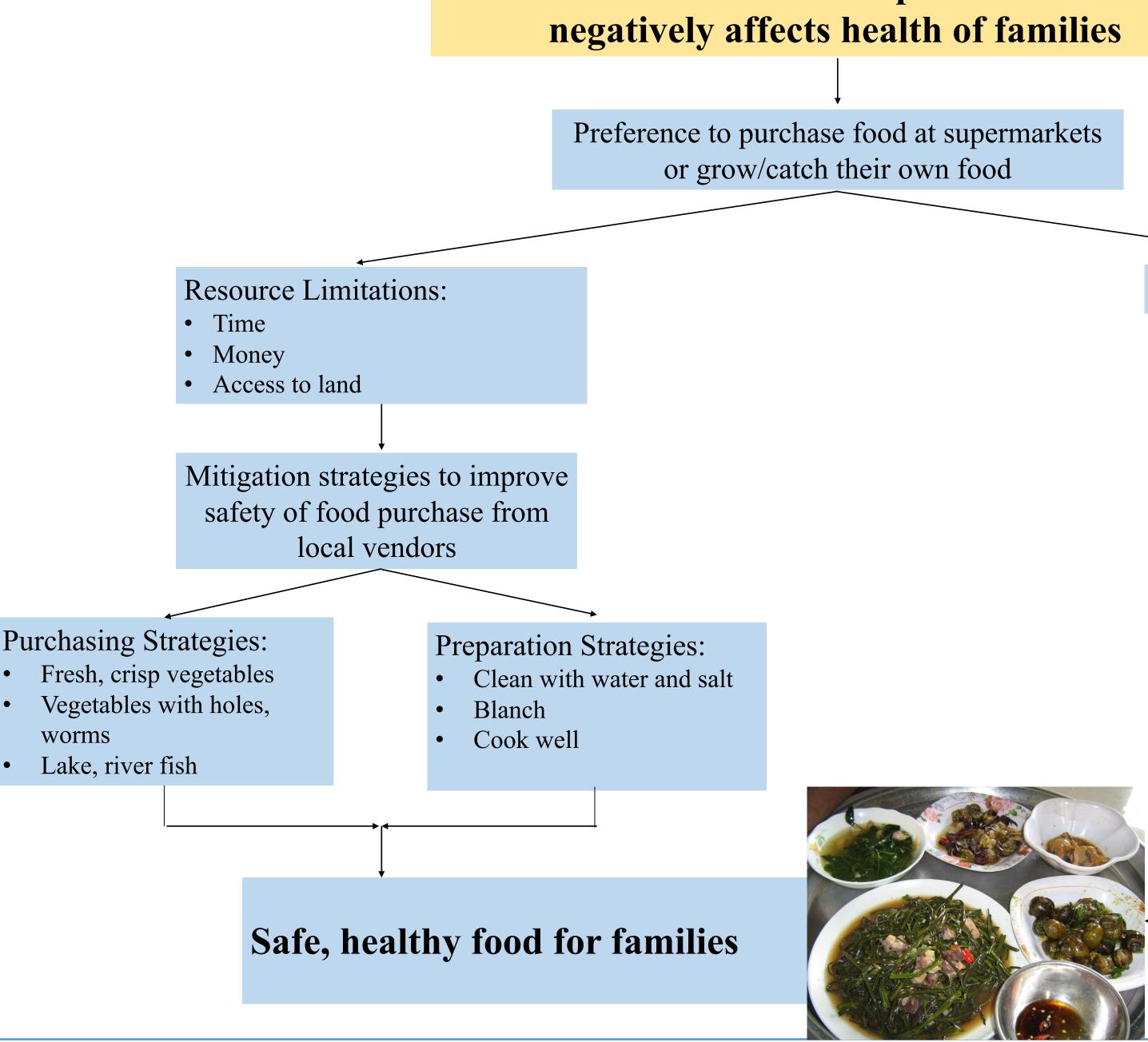
# Methodology

- Interviewed 24 women (6 grandmothers, 18 mothers) responsible for care of a child under 5 on family nutrition habits, perceptions of food safety and barriers to food safety. All women also agreed to participate in food security questionnaire.
- Using PhotoVoice<sup>5</sup> approach, after initial interview, women were loaned a camera for 2-3 days to take photographs of their food, food preparation, and other aspects of their lives that affected their nutrition.

# Results

- Deep-seated fears of chemical contamination of foods affect how women feed their families.
- Women prefer natural foods and would like to be able to grow their own vegetables, catch their own fish, and raise their own animals.
- They feel that safer foods do exist, but are expensive and far away and therefore inaccessible.
- Because resources to be able to grow their own foods or purchase safer foods don't exist, they utilize a series of strategies to make foods safer for their families.





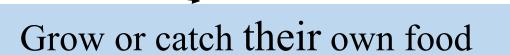
**Purchasing Strategies:** "I buy the better-looking ones. For vegetables, if they don't look good, I don't buy them ... But on the goodness, if they look too good, I don't buy it either. If there's some caterpillar or something, we can wash them more. Those don't

**Cleaning Strategies:** "Blanch to get rid of that stuff. I even clean it for three or four times. I soak it to substances. I am afraid that they are chemicals. I'm afraid that it would



"Because nowadays there are many chemical-injected meats. A few days ago, I bought half kilogram of pork. It smelled very bad...I then tried to marinate it and dried it under the sun; however, it still had bad smell."





- Although many women went into detail about the use of chemicals on vegetables, they also believe that chemicals are affecting their ASF products.
- Further study on how their mitigation strategies effect the nutritional value of their diet may be needed.
- Interventions that wish to decrease rates of foodborne illness and increase animal source food consumption should also address the belief that the food system has been compromised by the addition of chemicals and pesticides.





### **Possible Sources of Beliefs**

### • Facebook:

• "Mostly of my concern, I saw the post on Facebook. Do you see, there is pus in pork and beef."

### • Hearsay:

- "I heard people say they're full of chemicals and are needed to be cleaned to get rid of some of the chemicals. That's why we blanch them, dear."
- "A lot of people got food poisoning. It's hearsay, but it's scary."



"The photo that my family is altogether, there is the husband and wife and everyone. The photo when we have a meal together."

### Conclusions

• Women see chemicals used in foods as the cause of foodborne illness.

### References

- <sup>1</sup> WHO World Health Organization, *Reducing stunting in children: equity considerations for achieving* the Global Nutrition Targets 2025. 2018, World Health Organization: Geneva.
- <sup>2</sup> National Institute of, S.C., H.C. Directorate General for, and I.C.F. International, *Cambodia* Demographic and Health Survey 2014. 2015, National Institute of Statistics/Cambodia, Directorate General for Health/Cambodia, and ICF International: Phnom Penh, Cambodia.
- <sup>3</sup> Monika Blossner, M.d.O., *Malnutrition: Quantifying the health impacts at national and local levels*, in Environmental Burden of Diseases Series. 2005, WHO World Health Organization.
- <sup>4</sup> Darapheak, C., et al., *Consumption of animal source foods and dietary diversity reduce stunting in* children in Cambodia. Int Arch Med, 2013. 6: p. 29. <sup>5</sup> Wang, C. and M.A. Burris, Photovoice: concept, methodology, and use for participatory needs assessment. Health Educ Behav, 1997. 24(3): p. 369-87.

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