

**Food Safety Knowledge and Food Handling Practices of
women responsible for food preparation in the
households of Mpumalanga Province, South Africa**

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Structure of the Presentation

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Background information

- ▶ Food safety is a global health goal and foodborne illnesses are among the most widespread public health concern.
- ▶ Millions of South Africans contract food poisoning every year (WHO, 2007) and people are dying from diarrheal diseases, especially children under the age of three years.
- ▶ Approximately 332 food poisoning cases were reported in Mpumalanga Province in 2008 and increased by 72% in 2009 (DoH, 2009).
- ▶ The global incidence of foodborne illnesses is difficult to estimate, even in South Africa because most of the cases are rarely reported.

Background cont.....

- ▶ Fein et al. (1995) reported that foodborne illnesses result from foods which are prepared outside home and
- ▶ WHO (2002) showed that it results from foods prepared at home.
- ▶ However, DoH (2009) indicated that the issue is not about the place where food is prepared, but could be attributed to contamination of food and drinking water due to improper food handling practices, poor personal hygiene and poor sanitation.
- ▶ Foodborne illnesses can be prevented only if food safety procedures are followed from production to consumption.

Background cont...

- ▶ Studies revealed that consumers have inadequate knowledge and improper food handling practices.
- ▶ The main focus of this study was on women responsible for food preparation at household level.
 - assess their level of food safety knowledge and
 - food handling practices

Methodology

- ▶ Design & techniques
 - Descriptive cross-sectional study
 - Quantitative & qualitative
- ▶ Study population & Sampling
 - Simple randomly sampling: 60 households
 - Convenient sampling: 60 women (Interview)
 - Simple random sampling: 12 women (observation)
- ▶ Data collection methods
 - Researcher administered questionnaire (Face-to-face interview)

Analysis

- ▶ SPSS (version 22) for quantitative
- ▶ Data was interpreted in percentages
- ▶ Thematic analysis for qualitative data
- ▶ Likert scale was used to assess the level of knowledge

Score	Interpretation
0 – 5	Limited knowledge
6 – 10	Satisfactory knowledge
11	Adequate knowledge

- Chi-square
- Ethical procedures were followed.

Study area in Mpumalanga Province



Results

Demographic	%
Age (years)	
• 20 and below	1.7
• 21 – 30	50.0
• 31 – 40	26.7
• Above 40	21.6
Educational level	
• Never attended	1.7
• Primary	6.7
• Secondary	58.3
• Tertiary	33.3
Employment status	
• Unemployed	91.7
• Domestic workers	8.3

Household characteristics

Characteristics	%
Source of fuel for cooking	
- Electricity	26.7
- Firewood	40.0
- Electricity and firewood	31.6
- Coal	1.7
Source of water	
- Communal tap	96.7
- Own borehole	3.3
Types of livestock	
- Chicken	30.0
- Ducks	15.0
- Cattle	11.7
- Goat	8.3
- Sheep	6.7
- Pigs	3.3
Toilet facility	
- Ventilated toilet	85.0
- Flush toilet	15.0
Dumping hole	
- Yes	91.7
- No	8.3

Appropriate responses relating to food safety knowledge

Food safety knowledge statements	%
1. Washing hands with soap and water before cooking and eating	91.7
2. Cooked meat are left at room temperature for less than two hours	8.3
3. Iced cooler box cools down hot foods and keep them safe for hours	16.7
4. Microwave is safe to defrost meat or chicken	28.3
5. Preparatory surface areas to be clean before preparing food	73.3
6. Washed fruit and vegetables before use	28.3
7. Frozen foods are pick last during shopping	28.3
8. Best before date or expiry date shows safety of food for consumption	81.7
9. Wash cutting board with soap and rinse in hot water to kill bacteria	45.0
10. Raw eggs or foods containing raw eggs are safe for	23.3

Level of food safety knowledge

Test score	% (n)	Interpretation
0 – 4	41.7 (25)	Limited knowledge
5 – 8	53.3 (32)	Satisfactory knowledge
9 – 10	5.0 (3)	Adequate knowledge

Appropriate responses of food handling practices

Questions	Appropriate responses	%
How do you wash your hands before cooking or eating?	With soap and water	56.7
How do you defrost frozen meat or chicken?	Cold water and change it after 30 minutes	26.7
During shopping when do you pick refrigerated or frozen meat?	At the end of the shopping trip	35.0
What do you do to your head when preparing food?	Cover it	58.3
What do you do to your kitchen before preparing food?	Clean it	54.0
How often do you empty the garbage bin?	Daily	20.0
How do you check if milk is safe for consumption?	Expiry date	80.0
Where do you store raw meat or chicken in the refrigerator, not freezer?	Lower shelf	71.7
What do you do to a knife that was used to cut meat before cutting vegetables?	Wash with soap and water	26.7
How do you prepare food with a sore at the back of	Bandage the sore and	16.7

Food practices observational results

- 12 women were observed

Practices	n
Mixed food in the refrigerator	5
Stored food properly in the refrigerator	2
Stored food properly in the cupboard	10
Cleaned the cooking area	10
Head not covered during food	3
Head covered during food preparation	4
Washed vegetables before preparation	8
Defrost by immersing in cold water	7
Wipe utensils with cloth before use	8
Garbage area inside the yard	9

Comparison results

- ▶ Chi-square was performed to determine the factors that influence food handling practices among women,
- ▶ Neither age, educational level nor level of food safety knowledge was found to have any influence.

Discussion

- ▶ Food handling practices were found to be appropriate in some areas and inappropriate in another.
- ▶ Studies shows that consumers often implement unsafe food-handling practices during food preparations at their homes. Such practices need to be improved to reduce the risk and incidences of foodborne illnesses.
- ▶ Lack of food safety knowledge and negligence
- ▶ environmental contamination, poor social condition, inadequate personal hygiene practices and lack of safe food preparation facilities are interrelated factors that result to foodborne illnesses.

Conclusion & recommendations

- ▶ Foodborne illnesses can occur in the household and it is at this level that most corrective measures can be made.
- ▶ Community health professionals are in constant interaction with the public and are reliable resources to persuade people to adopt desirable habits as regards food safety. It is important for these professionals to be knowledgeable on food safety and proper food handling to be able to educate the public.
- ▶ Home-based caregivers should be trained to be able to assist during home visits.

Conclusion & recommendations

- ▶ Since WHO is in partnership with other stakeholders in developing policies to promote safety of food, it is upon us to appropriately implement these policies.
- ▶ The policies covers the entire food chain from production to consumption. The food safety programmes should strengthen food safety systems and educate consumers about appropriate food handling.

Foodborne illnesses is common and can be prevented only if consumers can stick to preventive measures:

- safe food keeping, storage & preparation
- good personal hygiene practices.

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