



A microbial analysis of street vended foods: A case of Gweru urban area (ward 14)

Sharon, Tanaka, Caroline, Janet, Shelter, Rudo, Constance, Laura ,
Welldone and Samantha

REGINA MUNDI HIGH SCHOOL



INTRODUCTION

Origin of street vended foods

- Vanishing of formal canteens at work places
- Increase in unemployment
- Slow economic growth

Street vended foods are favoured by the public

- Cheap and readily available
- Served in cultural dishes

Why street vended food cause public health risk

- Prepared in places which lack basic infrastructure.
- Vendors are difficult to control.
- Vendors lack factual knowledge on basic hygiene
- Vendors look for cheapest materials which may not be safe.
- Some of them are not license.

Which diseases may be caused by street vended foods

- Cholera , Typhoid and Diarrhea

RESEARCH GAP

- Past researchers failed to unearth the microbial quality of street vended foods in Provincial cities such as Gweru
- Key stakeholders have no readily available strategies to curb the disease
- Many people are blaming vendors without concrete evidence

This study is aimed to eliminate some of the dynamics at play in street vending in Gweru urban ward 14 and to cast light on the microbial quality of street vended foods and to find most contaminated sites and put strategies to safeguard health of citizens.

RESEARCH PROBLEM

In August 2018, there was an outbreak of Typhoid in Gweru Urban Area but there was no further researches which were done to examine microbial quality of street vended foods and personal hygiene of street vendors. Therefore, as student researchers under NGBS we decided to answer this problem.

HYPOTHESIS:

NULL HYPOTHESIS :

H_0 : Food sold by vendors in Gweru ward 14 does not contain pathogens hence not responsible for outbreaks of typhoid

ALTERNATIVE HYPOTHESIS :

• H_1 : Food sold by vendors in Gweru Ward 14 has pathogens that are responsible for causing food borne diseases such as typhoid and cholera and is responsible for the periodic disease outbreaks experienced in the area

OBJECTIVES

1. Collect demographic information and food samples from vendors.
2. Carry out biochemical and molecular analysis to detect for pathogen causing typhoid .
3. Establish the most contaminated vending sites

MATERIALS AND METHODS

- **Material:** Equipped microbiology laboratory and Equipped molecular biology laboratory
- **Methods:** Indirect investigation, descriptive survey, sampling, culturing of samples (blood agar, MacConkey, mannitol salt EMB agar, Triple iron sugar), Biochemical test (indole, citrate, catalase and oxidase) and multiplex PCR

Results

- From a population of 105 vendors from 20 vending sites, 25 vendors from 5 sites were sampled
- 42 food samples were collected and tested

Table 1. below shows preliminary results of biochemical test

<i>Organism</i>	Number of Isolates
<i>Vibrio sp.</i>	0
<i>Salmonella sp</i>	0
<i>Pseudomonas sp.</i>	0
<i>Shigella sp.</i>	0
<i>E. coli</i>	0
<i>Streptococci sp(normal flora and no pathogenic)</i>	>300

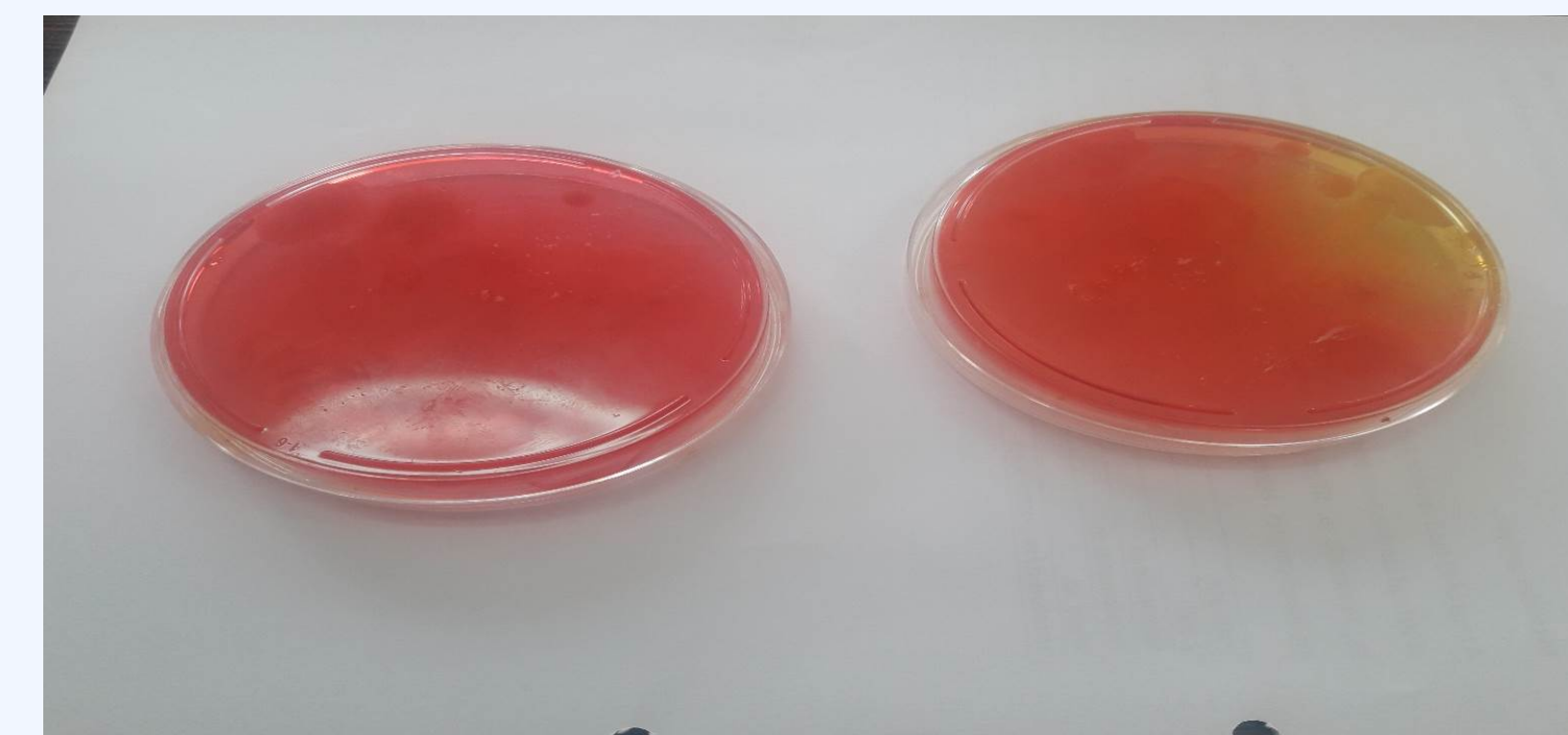


Figure. 1 Laboratory processing of collected samples and an example of the culture media used.

DISCUSSION AND CONCLUSION

- In general vendors practise good health hygiene practices
- Preliminary results need to be confirmed by
- Increase in number of samples
- Increase in number of sampling times
- Food and water samples to be sampled

CONCLUSION

- Food sold by vendors in Gweru ward 14 does not contain pathogens hence not responsible for outbreaks of typhoid

APPLICATION

- Conscientising the community
- Engaging community in finding health solutions
- Developing of typhoid diagnosis centers
- Schools able to diagnose typhoid on their own



Supporting the next generation of
Biomedical Scientists

