



ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 5.2
IJAR 2017; 3(1): 697-698
www.allresearchjournal.com
Received: 02-11-2016
Accepted: 03-12-2016

Kariuki JG
Dean, School of Public Health,
Mount Kenya University,
Kenya

Orago SS
Professor, Kenyatta
University, Kenya

Food handling practices and the prevalence of food borne pathogens among food handlers in Embu municipality, Kenya

Kariuki JG and Orago SS

Abstract

Food borne diseases constitute a growing public health problem world-wide and a significant cause of reduced economic activity. The objective of this study was therefore to assess the food handling practices and the prevalence of food borne illness amongst food handlers in Embu municipality. A cross-sectional survey involving Food handlers working in commercial eating houses in Embu municipality was conducted.

As a result, a total of 242 stool specimens were analyzed for the most common etiological pathogenic agents; seventy (28.9%) of the food handlers were infected with *Salmonella typhi* and ten (4.1%) with *Entamoebahistolitica*. Significant differences were noted in the prevalence of *Salmonella typhi* among food handlers who were 30 years old and below and those above 30 years ($\chi^2 = 6.86; p < 0.05; df = 1$). Over 50% of the food handlers had high knowledge and understanding of the food borne illnesses, their symptoms, causes and preventive measures. Significant differences were noted between those with secondary education and above and those with primary education and below on the knowledge of specific food borne illnesses ($\chi^2 = 9.26 < 0.05; df = 1$).

Evidently, food borne illnesses and food handling practices are still a major threat to public health in Embu Municipality. It is recommended that additional in-depth studies be undertaken so as to provide a clear national burden of food borne diseases in Kenya.

Keywords: Food handling, practices, food handlers, food borne diseases

Introduction

Manuscript

Problem statement: It is estimated that up to 70% (WHO, 2000) [8] of diarrhoeal diseases may be caused by contaminated foods. Most food borne diseases are attributed to food contamination through unhygienic food handling practices, infected food handlers and lack of appropriate knowledge on food borne diseases by food handlers.

Justification: Very little research work and surveillance of food borne diseases has been done in Africa, and Kenya in Particular. The incidences of food borne diseases are not easy to estimate in Kenya as most of them are lumped together when recording, as diarrhoea diseases. As a result, under-reporting, and inadequate diagnostic facilities suggest that foodborne disease are more than is recorded by the Ministry of Health.

Methodology: This study sought to assess the food handling practices and the prevalence of food borne study illness amongst the food handlers in Embu Municipality. Embu municipality has a population of 52,446 persons (GoK, 1999). Both random and systemic sampling procedures were used to identify food handlers to be included in the study as they attended routine medical examination. Stool specimens were taken for microscopic analysis for ova and cysts; using Ritches modified formal ether stool concentration method and culture for bacterial investigations. Knowledge on food borne diseases, socio-demographic factors and food handling practices were evaluated using pre-tested structured questionnaires.

Correspondence
Kariuki JG
Dean, School of Public Health,
Mount Kenya University,
Kenya

Results: A total of 242 stool specimens were examined for pathogenic bacteria, the results showed that food borne illness and food handling practices were still a public health problem in Embu Municipality, seventy (28.9%) of the food handlers were infected with *Salmonella typhi* and ten (4.1%) with *Entamoebahistoltytica*. Significant differences were noted in the prevalence of *Salmonella typhi* among food handlers who were 30 years old and below and those above 30 years ($\chi^2 = 6.86$; $p < 0.05$; $df = 1$). Over 50% of the food handlers had high knowledge and understanding of the food borne illnesses, their symptoms, causes and preventive measures. Significant differences were noted between those with secondary education and above and those with primary education and below on the knowledge of specific food borne illnesses ($\chi^2 = 9.26 < 0.05$; $df = 1$).

In addition, about 42% of the food handlers had no valid medical certificates, 21% without protective garments and even among those who had them, (31.5%) were dirty. Among the cooks, 76.6% did not have head covers. Touching of foods with bare hands was observed in 55.1% of the food handlers, while 42% did not wash hands after touching raw foods. Most cashiers, (64%) were found handling food after handling money without washing hands. Significant differences were noted between those who washed hands before touching foods in high and low class eating houses ($\chi^2 = 37.06$; $p < 0.001$; $df = 1$). Though most of the premises were provided with refuse containers, the majority (71.9%) of the containers were without refuse covers.

Conclusion: Compliance with food handling practices and health measures as laid out in the Public Health Act Cap 242 and the Food, Drugs and Chemical Substances Act Cap 254 laws of Kenya was not satisfactory. As a result, food borne illnesses and food handling practices are still a major threat to public health in Embu Municipality. Measures should be undertaken by the Government to raise awareness on food safety and ensure effective and efficient enforcement of related legal provisions. Results of this study will hence be useful to public health managers in their effort towards improvement of public health. It is recommended that additional in-depth studies be undertaken so as to provide a clear national burden of food borne diseases in Kenya. This would cover other pathogens not included in this study such as *S. aureus*, *C. perfringens*, *C. botulinum*, *B. cereus*, *E. coli*, *C. jejuni*, *Y. enterocolitica*, *L. monocytogenes*, chemicals, aflatoxin, plant and animal poisons.

References

1. Cheesbrough M. District laboratory practice in Tropical countries part III. Cambridge University press, United Kingdom, 2000.
2. Hopkin A. Food Analysis. In : Clays Handbook of Environmental Health, Editor W.H. Basset, 8th edition, New fetterlane, London and West Street, New York, 1999, 293 - 618.
3. Republic of Kenya. Embu District Annual Health Report. Embu, Kenya, 2000.
4. Republic of Kenya. Application of Hazard Analysis Critical Control Points (HACCP). Concept in food preparation places. Workshop Report 11th - 13 June and 13 - 17th August, 2000. Ministry of Health, Nairobi. Kenya, 2000.
5. Republic of Kenya. Report on Typhoid outbreak in Embu District. Ministry of Health. Nairobi, Kenya, 2001.
6. Republic of Kenya. Report on disease out breaks in Kenya, Ministry of Health, Health Information System, Nairobi, Kenya, 2001.
7. World Health Organisation. Food borne diseases; a focus for health education: Geneva, Switzerland, 2000.
8. World Health Organization. (WHO). Food safety and food borne illnesses, WHO fact sheet no. 237, Geneva, Switzerland, 2002.