



Perception of Food Safety and Prevalence of *Staphylococcus aureus* and *Salmonella* species Carriers among Fayoum University Food handlers

Abstract

Abstract: Foodborne diseases encompass a wide spectrum of illnesses especially in developing countries.

Aims: This study aimed to investigate food handlers' knowledge, attitude and practices about food safety in four restaurants in Fayoum University and to assess the carrier rate of *S. aureus* and *Salmonella* spp. also determination of the total viable count, and level of hand contamination with *E. coli*, other members of Enterobacteriaceae as well as other aerobic Gram-negative bacteria.

Methods: A cross-sectional, descriptive, observational study was conducted among 109 Fayoum University food handlers serving four main kitchens at the University. The food handlers interviewed using a pre-tested questionnaire included three main topics regarding knowledge, attitude and practices of food safety. Data collectors observed food handlers' to collect information on food preparation, handling and the sanitary condition of the facilities. Microbiological samples were collected from 108 healthy food handlers including swabs from throat, each nostril, stool and urine samples followed by culturing on proper media, also determine of the total bacterial count and hand contamination by fingerprint culture technique.

Results: About 90% of food handlers have good knowledge, between 30.1% and 88% found to have good practice. Carrier rate of *S. aureus* was 17.1%. The total viable bacterial count exceeds 300 CFU/hand in 37.3%. Out of 108 food handlers, 87 (36.1%) of them had contaminated hand with *S. aureus*, 26 (16.5%) with Enterobacteriaceae and 6 (3.8%) with *Pseudomonas* Spp.. All stool and urine samples were negative for *Salmonella* spp. **Conclusion:** To achieve a good level of food safety, pre employment investigations and training as well as continuous monitoring of food handlers should be implemented.

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