

## Assessment of Food Safety Culture in Select Restaurants and a Produce Market in Doha, Qatar

**Authors :** Ipek Goktepe, Israa Elnemr, Hammad Asim, Hao Feng, Mosbah Kushad, Hee Park, Sheikha Alzeyara, Mohammad Alhajri

**Abstract :** Food safety management in Qatar is under the shared oversight of multiple agencies in two government ministries (Ministry of Public Health and Ministry of Municipality and Environment). Despite the increasing number and diversity of the food service establishments, no systematic food surveillance system is in place in the country, which creates a gap in terms of determining the food safety attitudes and practices applied in the food service operations. Therefore, this study seeks to partially address this gap through determination of food safety knowledge among food handlers, specifically with respect to food preparation and handling practices, and sanitation methods applied in food service providers (FSPs) and a major market in Doha, Qatar. The study covered a sample of 53 FSPs randomly selected out of 200 FSPs. Face-to-face interviews with managers at participating FSPs were conducted using a 40-questions survey. Additionally, 120 produce handlers who are in direct contact with fresh produce at the major produce market in Doha were surveyed using a questionnaire containing 21 questions. A written informed consent was obtained from each survey participant. The survey data were analyzed using the chi-square test and correlation test. The significance was evaluated at  $p < 0.05$ . The results from the FSPs surveys indicated that the average age of FSPs was 11 years, with the oldest and newest being established in 1982 and 2015, respectively. Most managers (66%) had college degree and 68% of them were trained on the food safety management system known as HACCP. These surveys revealed that FSP managers' training and education level were highly correlated with the probability of their employees receiving food safety training while managers with lower education level had no formal training on food safety for themselves nor for their employees. Casual sit-in and fine dine-in restaurants consistently kept records (100%), followed by fast food (36%), and catering establishments (14%). The produce handlers' survey results showed that none of the workers had any training on safe produce handling practices. The majority of the workers were in the age range of 31-40 years (37%) and only 38% of them had high-school degree. Over 64% of produce handlers claimed to wash their hands 4-5 times per day but field observations pointed limited handwashing as there was soap in the settings. This observation suggests potential food safety risks since a significant correlation ( $p < 0.01$ ) between the educational level and the hand-washing practices was determined. This assessment on food safety culture through determination of food and produce handlers' level of knowledge and practices, the first of its kind in Qatar, demonstrated that training and education are important factors which directly impact the food safety culture in FSPs and produce markets. These findings should help in identifying the need for on-site training of food handlers for effective food safety practices in food establishments in Qatar.

**Keywords :** food safety, food safety culture, food service providers, food handlers

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