

A survey study on the assessment of food handler's compliance to personal hygiene practices regulation in selected Malaysia food outlets

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Abstract

Food safety remains a major issue around the world particularly when the COVID-19 pandemic becomes the main issue nowadays. Food safety is essential to the human population worldwide because food is the primary energy source and nutrition for humans. Therefore, food handlers' personal hygiene is one of the factors that are necessary to maintain food safety. The purpose of this study was to assess the food handler's compliance with personal hygiene practices in randomly any food outlets across Malaysia including Kuching, Sarawak; Lawas, Sarawak; Johor Bahru, Johor; Kuala Penyu, Sabah, and Gurun, Kedah. A quantitative method, a cross-sectional descriptive study to one thousand and five (N = 1005) food handlers who participated in the questionnaire and observation checklist was developed by modifying questions in accordance with the Food Hygiene Regulations 2009. Overall, the mean percentage of conformity in adhering to food handler attire was the highest observed at Gurun, Kedah and Kuala Penyu, Sabah with 86.96% and 80.79%, respectively, followed by Kuching, Sarawak with 77.5%, Johor Bahru with 76.71%, and Lawas, Sarawak with 74.93%. Personal hygiene practices conformity showed a high mean percentage with all districts scoring >91% higher than non-conformity. The food handlers also show less unhygienic behaviour while on duty and scored a mean percentage of > 92%. Although in that positive behaviour, some of the food handlers did not perform some unhygienic practices ($\leq 8\%$). In conclusion, there is no significant difference ($p\text{-value} > 0.05$) in the level of conformity between the mean percentages among all districts. Thus, this issue shall raise a concern to the food industries in order to make sure their workers comply with the legal requirement and to avoid any food poisoning outbreak related to food hygiene and food safety in the future.

1. Introduction

Food safety is still a significant problem all around the world. Every year, millions of people throughout the world are hospitalized and even die caused of the consumption of contaminated food and developing foodborne illness (World Health Organization, 2015). This situation could be the result of those countries' weak food safety and hygiene standards. In 2014, Malaysia recorded 49.79 incidents of food poisoning per 100,000 people, with improper food handling accounting for more than half of all cases (Ministry of Health Malaysia

(MOH), 2014). The MOH reports that the use of untreated water for non-beverage consumption, ineffective food handling training and poor sanitation and hygiene are recognized as major national risk factors for food poisoning (Ministry of Health Malaysia, 2012).

The food service sector in Malaysia has gained traction as lifestyles have shifted from "home cooking" to "eating out", especially among the urban population, leading to the phenomenon of local food industries "mushrooming" (Yeo and Leu, 2014). Furthermore, as

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