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Evaluation of basic knowledge on food safety and food handling practices amongst migrant food handlers in Peninsular Malaysia

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ABSTRACT

This study was aimed to measure the basic knowledge on food safety and food handling practices among migrant food handlers as these information is scarce in Malaysia. A cross-sectional study was conducted face-to-face amongst 383 migrant food handlers from three major cities in Peninsular Malaysia through questionnaire. Socio-demographic information of all respondents was collected. Questions on food safety knowledge (i.e. food cleanliness and hygiene, symptom of foodborne illnesses and foodborne pathogens) and food handling practices were assessed. The compiled data were analyzed by using the Statistical Packages for Social Science (SPSS) 16.0. Overall, migrant food handlers had poor level of knowledge on food safety with an average food handling practice. Significant effects were observed between respondents' food safety knowledge and socio-demography (country of origin and educational level) and two factors namely; respondents' nationality and attendance at food training programs showed significant associations with their food handling practices. Multiple logistic regression analyses revealed that attendance at food training programs was a significant and independent predictor of the respondent's food handling practice. The study's findings highlighted issues with regards to the extent of knowledge acquisition on food safety and hygiene by migrant food handlers. Therefore, this warrants improvements not only in the better delivery methods of training modules but also tight enforcement of attendance at the programs by the respective authorities.

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1. Introduction

Foodborne diseases are responsible for the majority of mortality and morbidity worldwide with up to 30% of population in industrialized countries suffering from foodborne illness annually (WHO, 2014). The consumption of food and water contaminated with potential foodborne pathogens such as bacteria, viruses, parasites and toxins accounts for more than 250 different foodborne illnesses (Linscott, 2011; Scallan et al., 2011; Scallan, Hoekstra, Mahon, Jones, & Griffin, 2015; WHO, 2014). Each year, approximately 48 million or 1 in 6 individuals in the United States fall sick, 128,000 are hospitalized and 3000 die from foodborne related illness (CDC, 2014), thus proving the importance of food safety and hygiene practices in the prevention of such illnesses.

The food service industry in Malaysia become more attractive as a results of change in life style from home cooking to "dining out" especially among urban dwellers, and lead to the phenomenon 'mushrooming' of the local food industry (Yeo & Leu, 2014). This has created a high demand for manpower in the food service industry resulting in the increase of employment of migrant workers from 6.6% in 2000 to 11.9% in 2013 (MEF, 2014). Unfortunately, an upward trend of food poisoning cases was also recorded with more than half of the linked to insanitary food handling (MOH, 2007) despite better food hygiene awareness (Zulkifle, 2007). Mishandling of food and the lack of hygiene can facilitate the transmission of foodborne diseases from farm to fork i.e., from the stage of food production, processing to packaging and distribution of food to presentation for food consumption (Abera, Biadegelgen, & Bezabih, 2010; Rall et al., 2010), thus enabling pathogens to contaminate edible products after ingestion of the contaminated food and multiply sufficiently to cause serious illness. The incidence of food and water borne

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