

## **Relationship Between Knowledge And Practice Among Food Handlers In Vocational College Johor State: Does It Compliance With Food Safety Standards Guide**

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### **Abstract**

Food safety has emerged as an important global issue and public health implications. In relation to that, food safety and health issue is often become concern in Malaysian institutions. In response to the increasing number of food borne illnesses, governments agencies are intensifying their efforts to improve food safety. Food consumed by the school children should be safe, nutritious and free from any bad organisms and chemicals harm. In addition, the food should also be sources of energy and health to the individual. The study was to determine the level of food safety knowledge and practices among food handlers in Vocational College in Malaysia. The study was conducted among food handlers in all Vocational College in Johor. Both the quantitative and qualitative research methods were used for data collection. The questionnaire was framed to elicit information on demographic characteristics (age, sex, education, area of operation, number of years of service and training received) and respondents' knowledge pertaining to basic food health with special reference to food handling, storage, and food poisoning. The respondents' knowledge on basic food knowledge of food is limited, while the level of food safety practices for hygiene is quite high, the level of food safety for the cleanliness of equipment and environment is high, and the level of food safety for the cleanliness of raw materials was also high.

keywords : Food Handlers, Food Safety, Knowledge , Practice,

### **1.0 Introduction**

Dining hall and canteen foods should be prepared safe to be consumed, nutritious and free from any hazards. Food is source of energy and health to the individual but food safety and health is always questionable and becomes an increasingly issues. In a recent review of foodborne illness outbreaks in foodservice , a group of food safety researchers has reported more than 800 outbreaks related with food handler practices, and end up with 80,682 cases of foodborne illness. For Instance, diarrhea which is related to food and water contamination kills about 2.2 million people a year. (WHO). In February 2013 Department of State Health Ministry Johor recorded an increasing in food poisoning cases in Johor (4 episodes) 117 cases of food poisoning, and (2 episodes) is from 21 schools, including vocational college district of Johor was involved in the incident food poisoning in the cafeteria and dining hall. (Johor State Health Department, 2013). Dining hall and canteen food is a major source of food at school. Thus, the operators and food handlers in school dining hall and canteen have to take responsibility for providing a clean and safe facilities plus nutritious and balanced diet to cater for physical and emotional needs of students. In relation to that, knowledge and

practices of food handlers on food safety is very important in the process of food preparation. According to Griffith et al, (2001) the careless practice of one food handler preparing food will cause cross contamination occurred resulting in food poisoning. He also describes the cause of food poisoning can occur due to unhygienic handler, bad sanitary equipments and improper handling of raw materials. Tan et al. (2012) in their study states that the knowledge of food handlers using proper hand washing is very low. Most food handlers do not drying up their hands using a clean towel after washing hands. Whilst Taylor et al. (2000) demonstrates that poor hygiene in washing hands after going to the toilet will cause the transfer of harmful microorganisms to food.

## **2.0 Food Safety**

According to FDA / WHO (2000) Food Safety is the degree of confidence in food. Food should be far from harm to the consumer when prepared, served and consumed. In general, food security means that food is clean from harmful micro organisms, toxins and clean out any alienated objects. (Seward II, 2003). In the United States and Japan, many children died as a result of eating raw meat contaminated by E. coli bacteria 0157: H7 contamination of foods. Hygiene and Food Safety has many good elements that need to be known and practiced by food handlers. The food security is including the operator, the equipment and the environmental itself, sanitation and hygiene during transporting food from one point to another should be carried out properly. (Ministry of Health Malaysia, 2002).

## **3.0 Knowledge and Practice**

Knowledge is the basic level of the cognitive domain while practice is a psychomotor domain which means physical action that needs repetitive in order to make it as practices. (Mok, 2010). Howes et al. (1996) proved that knowledge, attitudes and good monitoring are the key factor to reduce food contamination in foodservice area. Several observational studies done by (Oteri and Ekanem, 1989 & Manning and Snider, 1993) stated that knowledge alone not necessarily lead to a practice. This assertion is supported by the study, Tan et al, (2012) found that although all food handlers have attended training courses and hygiene and food safety, hygienic practices such as washing hands are considered known to them but when it comes into practice, not many food handlers are implementing it. The survey showed that food handlers washed hand after coming out of the toilet (36%) and did not use gloves at all times (4 %). Accordingly, guidelines and supervision of the management need to be enforced in ensuring that information is disseminated and practiced in food safety practices.

## **4.0 Flow Chart Food Safety Guide**

Flow Chart for Food Safety Guide has to be produced to provide guidance to the operator when handling food and food preparation. Flow chart must contain steps that need to be addressed before, during and after handling and preparing food. Hazard points during the handling and preparation of food must be shown and highlighted to ensure food handlers aware and take care of every step of food preparation.

## **5.0 Research Methodology**

### **5.1 Population and respondents**

The population in this research involved all food handlers, which consists of cooks, raw material handlers, food servers, drink mixers and dining hall and canteen assistants, from seven Vocational College in Johor. The number of respondents in this study are limited to 58 operators.

## 5.2 The study design

To achieve its objectives, the design used in this study is a survey method. This design was chosen because it is considered one of the most appropriate way to assess the knowledge and practices of food handlers on food safety practices in which they are able to describe the characteristics of the population and study a problem or phenomenon in order to learn, to analyse and recognize the problem studied. (Idris, 2003).

## 5.3 The instrument

In this study, researchers used the questionnaire as a research instrument to obtain the necessary information and data. In measuring knowledge of food handlers on food safety, use a dichotomous scale questions that answer "Yes" or "One" is used to refer to Mok (2010) , to evaluate the practices of food handlers Likert scale questions rates used where subjects indicate whether the respondent is frequent, regular, medium, rare or never for each statement indicating the practice of food handlers (Hashim, 2008). Data checklist with structured observation used as additional information in this study to obtain information in line with the practice item questionnaire given.

## 6.0 Findings

### 6.1 The research question 1: What is level of knowledge of food handlers?

In this study, the researchers found that level of knowledge of food handlers on food safety is high. Result is supported by Abdul Rahman (2011) whom stated that the operator's knowledge of food sanitation and food security is very high. In this research, proved that knowledge of food handlers in the aspects of food hygiene, personal hygiene is very high, and the cleanliness and hygiene equipment operator environment is moderate

### 6.2 The research questions 2: To what extent is the operator of food safety practices in hygiene?

Food safety practices of food handlers in hygiene in this study is high. Based on the findings of the study, Tan et al (2012) states that qualitative knowledge of food handlers on hygiene such as hand washing and glove use is low, respectively 30.7% and 18.7%.

### 6.3 The research questions 3: To what extent food safety and hygiene practices in hygiene equipment operator and the environment?

Food safety practices of food handlers in the cleanliness of equipment and the environment in this study is also high. Study by Lee et al. (2012) state their findings demonstrate safe practices in hygiene and food handling environments are high in terms of use in sanitation equipment and the environment.

### 6.4 The research questions 4: To what extent is the operator practices in hygiene and safety in handling raw materials?

Hygiene practices and safe handling of raw material in this study is expected to moderate. Based on the findings Siow & Abdullah (2011) stated that approximately 66.2% of food handlers have a good response to demand for clean and safe raw material and 52.3% always use gloves when handling raw materials

## 7.0 Conclusion

This study has shown that there is a positive relationship between knowledge and practices in food safety handling. It is important that the food handlers is given knowledge about food safety hazards to avoid the risk of contamination. The information in the food safety message to the food handler should include guidelines for the prevention of cross contamination and the correct methods of handling raw materials. The message should also include some information about food borne pathogens

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