

## ISSUES ON MONITORING AND ENFORCEMENT OF FOOD POISONING IN RELIGIOUS SCHOOLS: A CASE STUDY IN KEDAH

NOOR AZNIZA ISHAK <sup>1</sup>, SITI ROZAINA KAMSANI <sup>2</sup> and ZAINUDIN OMAR <sup>3</sup>

<sup>1,2,3</sup> School of Applied Psychology, Policy and Social Work, Universiti Utara Malaysia, Kedah, Malaysia.

### Abstract

This study was conducted to identify the factors that contributed to food poisoning as well as the level of enforcement and monitoring conducted by the Kedah State's Department of Health. This study was conducted through survey method involved a total of 548 respondents including students, teachers, food handlers/workers and parents. The findings showed that the majority of respondents have information and knowledge regarding the aspects of food hygiene, self-hygiene, or premises hygiene. The findings also showed that the majority of respondents were satisfied with the level of enforcement and monitoring carried out by the authority in their schools on all aspects. In conclusion, the findings in this study can provide the important information on monitoring and enforcement, especially for Food Safety and Quality Division, as well as students, food handlers, teachers and parents.

**Keywords:** Food Poisoning, Factors, Enforcement and Monitoring, Religious Schools, Hygiene.

### INTRODUCTION

We frequently hear about food poisoning, and it has developed into a topic worthy of discussion in the editorial pages of newspapers, articles, and magazines devoted to educational institutions. Food poisoning has also resulted in deaths, according to reports. According to Noor Hasani (2011), a National Poison Center official, many people in the city get food poisoning at least once a year, whether they realise it or not.

Based on the statistics reported, from January to April 2017, a total of 2325 cases of food poisoning were recorded involving educational institutions either primary or secondary schools. This result has shown an increase in cases of 57% compared to last year from 30 cases to 47 cases and the largest contributor to food poisoning statistics in Malaysia (Ain Adila & Dahlila Putri, 2018). According to the data, as of May 2019 a total of 213 cases of food poisoning were reported involving 68 in schools under the supervision of the Ministry of Education Malaysia (MOE), (26) in non -MOE schools, (19) in institutions, (55) in private homes and 45 incidents elsewhere. A case of food poisoning has been reported, which is thought to have been caused by eating laksa purchased from a stall in Kupang, Baling, Kedah (Akmal, 2019). A similar incident occurred at a Kedah religious school, where 24 students and 5 teachers were treated by medical personnel after contracting food poisoning after eating fried rice in the school canteen early in the morning (Berita RTM, 2/11).

Nor Azniza et al. (2015) used a study of 1,252 students, teachers, and food handlers from selected schools in Kedah to investigate the causes of food poisoning, food buying activity, and management aspects of food handling. The survey's findings revealed a high degree of understanding about the causes of food toxicity. There has been a lot of speculation, but one hypothesis stands out.

The results of the study also suggest that operators should emphasise all five aspects of food handling management, including food safety management, food handling practises, temperature regulation, preparation, and premises, as well as manufacturers (State Health Department, 2012). This is due to the observations of both the teacher and the student.

In general, a study regarding food management and handling in religious schools in all districts of Kedah should be conducted, based on these issues and the results of previous research conducted by the researchers, as the number of cases of food poisoning among school students continues to rise each year. As a result, the focus of this article will be on the factors that lead to the occurrence of food poisoning and examine the degree to which the Department of Health has previously monitored and enforced.

## **CONCEPTUAL AND OPERATIONAL DEFINITIONS OF FOOD POISONING AND ENFORCEMENT AND MONITORING**

### **Food Poisoning**

In MD Health Resouce's (2012) report, Food poisoning generally means ingestion of food or water that has been contaminated with microorganisms (bacteria, parasites, or viruses), microbial toxins, poisonous plants, or chemicals. According to Aisyah and Norraaini (2012), food poisoning is any disease caused by the intake of contaminated food or drink.

In this study, the causative factors of poisoning include aspects such as;

#### **1) Knowledge**

This aspect is to assess the extent to which knowledge of the causes of food poisoning is factors from bacteria, food mixed with dirty water sources, stored in inappropriate places, substandard cooking materials, improperly cooked food can cause poisoning, fruit taking -fruit that is not washed well and food will be safe to eat if stored in the refrigerator even more than 3 days.

#### **2) Attitude**

In this aspect will assess whether a person's attitude is the cause of food poisoning. This attitude is assessed to see the extent to which one's understanding of fruits picked directly from the tree is not dangerous to eat, eating food at roadside stalls is safe, delicious to cook regardless of who is cooking, keeping food stores clean is not the customer's responsibility, will not care to know whether the cook is sick or not, eat a favorite food even know the food is old and eat dishes that are not washed with hot water is still safe to eat.

#### **3) Self -Practice**

Assessment of a person's self -practice to assess the extent to which the person maintains personal hygiene before and after meals. Self-practice questions cover aspects such as washing vegetables and fruits is a must before eating, washing hands only before eating, no need to wash hands if using spoons and forks, washing hands with soap before eating, washing my hands after eating no need to use soap, boil eggs to eat and wash the eggs before cooking, fresh raw milk from the farm, drinking water from the water supply tap is clean and can be drunk

without cooking, hot food containers such as soup served in melamin containers (not glass or porcelain), drink leftovers mineral water in the car that has been in the car for more than 2 hours is still safe, eating rice in polystyrene containers is easier and safer and near pets is safe, half-cooked food, dishes that have been washed and located on the rack are already clean and no need to wash before filling new food, add seasoning powder to cook to give more taste and sweetness to food and recites prayers every time before eating.

### **Enforcement and Monitoring**

According to Herawati (2012), enforcement and monitoring means the range of actions and procedures taken by the entitled or competent state to ensure that the agency or an organization or individual potentially commits offenses without complying with environmental laws, or violating environmental implementation agreements. Where all these failures will be brought or returned to compliance and or will be punished through civil, administrative courts or prosecuted for imprisonment.

In this study enforcement and monitoring assessments include assessments of;

#### **1) Food Hygiene**

This dimensional assessment relates to enforcement and monitoring of food safety, condition of food prepared, periodic inspection of food provided, food monitoring records are always recorded, food safety and storage protection, equipment used for cooking, food cooked properly (e.g. using probe thermometer) and monitor the storage of cold food at the correct temperature of 80 C and hot cooked in a central temperature above 750 C

#### **2) Personal Hygiene**

In this aspect will assess the extent of enforcement and monitoring by the JKN on personal hygiene, health, wearing and condition of aprons, food handlers and employees. In addition to the assessment in the dimensions also involves knowledge of the Food Safety Management System, how to handle food properly and food hygiene training accompanied by food handlers and their employees.

#### **3) Cleanliness of the Premises**

This dimension, will assess the extent of enforcement and monitoring by the JKN related to the condition of hand washing, towel preparation and hand drying as well as the environment of the premises. In addition, assessments are performed on wipes for cleaning (e.g. using probe thermometers), premise construction structure, premise space, stored food preparation space, food storage room, and inspection of pest signs on premises and appoint a licensed contractor for disposal. Waste (waste oil and garbage)

## LITERATURE REVIEW

A study conducted by Noor Hasani (2011) showed that the factors of food poisoning are caused by contaminated food. The causes of food poisoning are such as the appearance of bacteria in food, as a result of dirty food preparation process, food not cooked properly and food exposed to a temperature environment of 30 degrees Celsius. Noor Hasani (2011) lists foods that are often affected by bacteria such as milk or dairy foods such as cheese and cream, fatty dishes such as *nasi lemak*, *nasi beriani* and noodles, bread and cakes, seafood such as shellfish, beef, chicken, fish and canned food that has been chipped or that is bloated on the top or rusty. In addition, poor environmental conditions and food handling also promote contamination by bacteria. Examples of common conditions include raw foods, meat, poultry and fish not stored in a cool place, frozen foods left to 'thaw' in a hot environment for too long, canned foods exposed to room temperature after opening, wet and watery foods. Exposed to hot places, fruits and vegetables that are not washed properly, food contaminated while cooked or packaged and food not stored immediately (Noor Hasani, 2011).

Whereas Sharif, Obaidat and Al-Dalalah, (2013) argue that among the factors contributing to the spread of epidemics on food by the food handlers themselves. These factors are improper hygiene practices and low levels of knowledge. The most common food handler offenses committed are using contaminated raw materials, inadequate food reheating, unsafe food suppliers and improper food storage. Similarly, the opinion presented by Nora et al (2015) based on their study on the factors of food poisoning in school canteens is due to food handlers lack of knowledge on food hygiene and safety handling.

According to Said and Sobri (2008), iron deficiency can impair behaviour, concentration, ability to learn, and ability to think. As a result, food service in the school canteen is a critical issue that requires serious consideration by school and canteen operators. To avoid food poisoning, it is a responsibility to provide safe and nutritious food. The factors that influence food service, particularly to school students, must be considered. For that purpose, the school needs to ensure that food services provided to students are focused. To meet the nutritional requirements of students while they are at school, canteen operators must be concerned about the food service provided, as this is a frequently discussed topic.

In terms of enforcement and monitoring, a study conducted by Norazla and Nor Atirah Isa (2019) entitled *Law Enforcement on Food Hygiene and Safety in School Canteens* showed that in addition to the factors of clean, safe, balanced and nutritious food preparation and personal hygiene of operators food, cleanliness of premises and equipment as well as training for food handlers which is the cause of food poisoning in schools, lack of monitoring and weak law enforcement on canteen operators are among the causes of canteen operators' lack of existing laws and guidelines as well. Is the cause of food poisoning cases? The results of the study suggest that if the Ministry of Health constantly monitors the food preparation process in accordance with food safety guidelines that have been set regularly can help prevent food poisoning and also regular visits from the MOH to school canteens are recommended to ensure food handlers in the school canteen can adhere to established guidelines.

A study conducted by Shamsuddin et al (2014) who studied on *Food Health and Safety: Consumer Awareness and Legal Provisions* has shown that the existing legal provisions nowadays show that there are still a number of consumers or generally the general public who do not seem to care on regulations associated with food, manufacturers, sellers or ways of handling food, food establishments or eateries or food premises. According to this scholar this is due to several things namely;

- 1) The public is unaware of the existence of such rules or laws.
- 2) Unlicensed operators/traders/sellers/operators may not be aware of such rules and regulations.
- 3) Licensed traders/sellers/operators know but do not comply because no enforcement is done.
- 4) Authorities are likely to be lax in enforcing rules and laws.
- 5) Authorities are likely to consider rules and laws relating to food, food preparation and eateries / food premises only minor matters, and not priorities.
- 6) Consumers or the public are intentional, negligent or negligent in fulfilling legal responsibilities.
- 7) Consumers do not exercise their rights to the best of their ability.
- 8) Consumers have no choice as long as there are no health problems happening to themselves.
- 9) Consumers are unable to distinguish between the concept of cleanliness according to the naked eye with the concept of cleanliness in terms of understanding and legal protection.

## **METHODOLOGY OF THE STUDY**

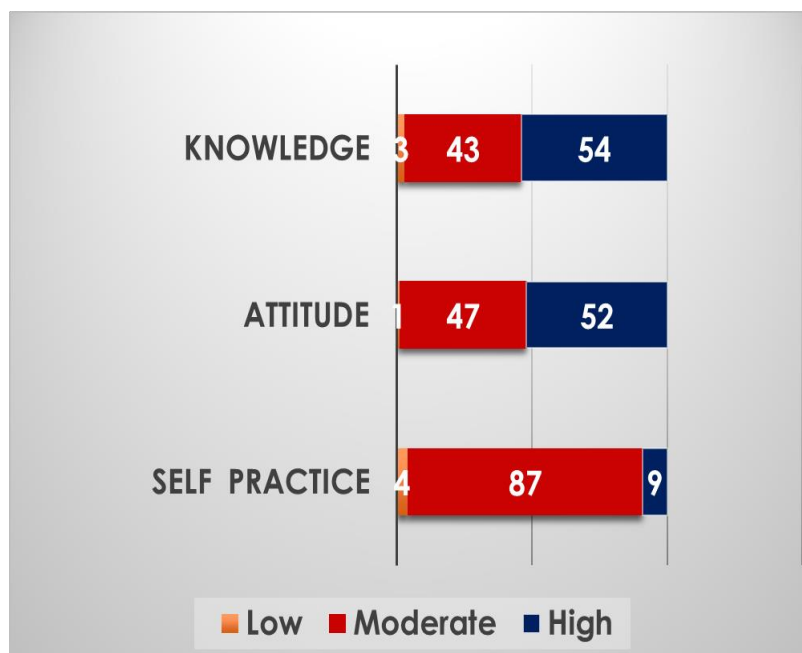
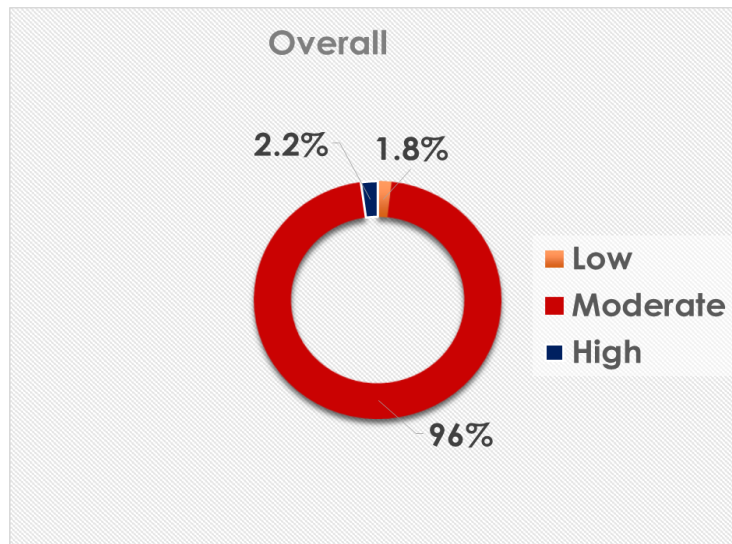
This study utilised questionnaires to collect data from students, teachers, food handlers/workers, and parents. A total of 548 respondents served as the study's sample. They were chosen through simple random sampling. The instruments used in this study were modified according to the study's suitability, taking into account the instrumental aspects of food poisoning factors as well as the level of enforcement and monitoring through the use of the Likert Scale (1932). The data collected in this study will be analysed using the statistical software package Statistical Package for Social Sciences (SPSS) Windows version 23.0, which will perform descriptive analysis.

## **RESULT**

### **Factors Causing Food Poisoning**

According to the study's findings, the majority of respondents (96 percent) stated a moderate level. Concerning the dimension of knowledge regarding the causative factors of food

poisoning, 54 percent of respondents stated that they were knowledgeable. Similarly, for the attitude dimension, 52 percent of respondents indicated a high level, while for the self-practice dimension, the majority of respondents, 87 percent, indicated a moderate level.



**Figure 1: Percentage of Factors Causing Food Poisoning (n = 548)**

### Enforcement and Monitoring

The study's findings in Figure 2 indicate that enforcement and monitoring of food establishments are high, with up to 53% of respondents stating as much. While 44% of respondents indicated a moderate level, and 3% indicated a low level. This demonstrates that

all respondents agree or are satisfied with the level of enforcement and monitoring in their schools in all areas, including food hygiene, self-care, and premises.

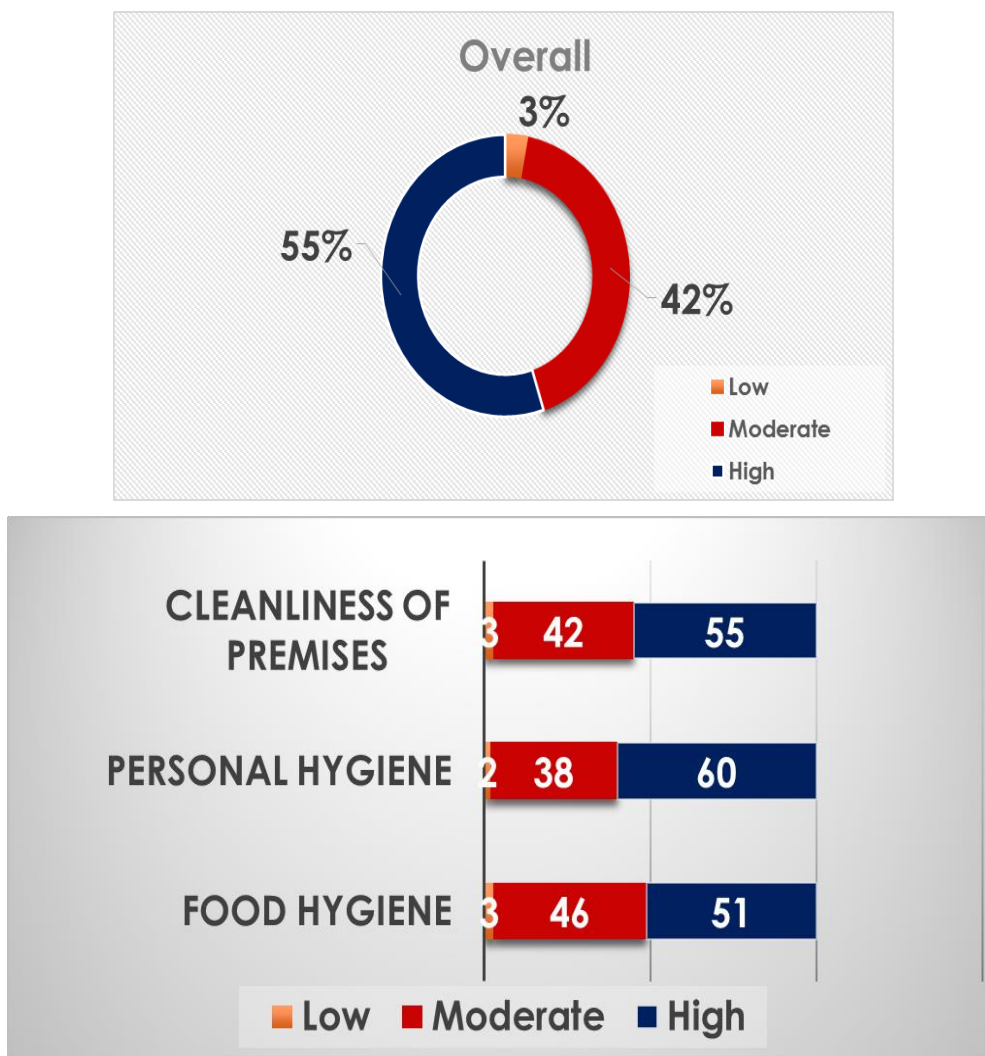


Figure 2: Percentage of Enforcement and Monitoring (n = 548)

## DISCUSSION

According to the study's findings, it can be concluded that the factor causing food poisoning is also a factor in one's self-practice. In terms of enforcement and monitoring, all respondents expressed satisfaction with the Health Department's constant monitoring of the school canteen's premises and food supply. Therefore, to ensure that self-practice of food hygiene and safety issues can be resolved, constant operations by the Health Department and school authorities is needed. In this regard, the agency should diversify their delivery methods of campaigns to students regardless of age or gender in all areas of Kedah, and encouraging them to cultivate self-practice of food hygiene and safety in their daily lives.

## CONCLUSION

In general, the findings of this study can indirectly assist in terms of providing information and education to food handlers, teachers, and the ministry in order to better understand and research the causes of food poisoning, as well as elements of the level of enforcement and monitoring that JKN has conducted to date. This information is critical for the parties involved to improve the existing policy in light of the proposals submitted with the goal of resolving the food poisoning epidemic that has recently afflicted our country, and thus reducing this problem to zero in the future.

## Acknowledgment

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