

FOOD SAFETY ISSUES: FACTOR INFLUENCING AWARENESS AND EDUCATION AT SCHOOL CANTEENS IN MALAYSIA

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Abstract- Food safety in school canteen is the responsibility of every person who involved in food service operation especially the food handlers. Awareness of food safety and food hygiene is very important in all human beings, which includes school canteen operator and food handlers. Moreover, the factor that influencing awareness, education and situation at school canteens in Malaysia in terms of food safety issues such guidelines, monitoring, awareness and campaign, also knowledge must be focused and complied from time to time by food handlers, the school canteen operator, school principal and others. Therefore, effective management of school canteens and human health with the enforcement, adoption legislation, non legislation as well as guidelines then ensure a perfect human health to address the problem of food safety in school canteens.

Keywords: Awareness, Food Poisoning, Food Safety

I. INTRODUCTION

The World Summit on Environment and Development, held in Rio de Janeiro in 1992, endorsed a new approach to national and international development agenda as well as the consideration of health and the environment. This Earth Summit formalized a commitment to improving health and protecting the environment as two prerequisites for sustainable development which have been endorsed by the World Health Organization [1]. Food safety in school canteen is the responsibility of every person who involved in food service operation especially the food handlers. According to Saidatul Afzan & Hayati [2], food handlers' attitude has positive and significant relationships with safe food handling and it is essential for food handler certification program which reveal behavioral change for a better quality training. Moreover, this study has also reported that adherence to school canteen rules, guidelines on canteen food handling and government regulations play an important role in influencing food handlers' attitude towards safe food handling. Young children have a higher risk than adults for foodborne illness due to their underdeveloped immune system, lower body weight and lack of control over meal preparation. Foodborne illness can result in long term health consequences and even death, especially in young children. among general consumers and have found unsafe food handling practices despite acceptable food safety knowledge.

According to Lawrence [1], Health is defined as a condition or state of human beings resulting from the interrelations between humans and their biological, chemical, physical and social environment. Moreover, health is the result of both the direct pathological effects of chemicals, some biological and social dimensions of daily life including housing, transport and other characteristics of metropolitan areas. Because of that, school canteen can be categories as

housing where people stay and doing their daily activities.

1.1. Food Safety

Food safety has emerged as an important global issue with international trade and public health implications. According to World Health Organization (WHO), food safety encompasses actions aimed at ensuring that all food is as safe as possible. If not, foodborne diseases will take place and foodborne diseases take a major toll on health. Every year about millions of people fall ill and many die as a result of eating unsafe food. From WHO website, article titled "10 facts on food safety" stated food safety have key global concerns include :

- 1) Spread of microbiological hazards (including such bacteria as Salmonella or Escherichia coli)
- 2) Chemical food contaminants
- 3) Assessment of new food technologies (such as genetically modified food)
- 4) Strong food safety systems in most countries to ensure a safe global food-chain.

Some people said, food safety are not quite different from food security. Food security can be defined as "secure access at all times to sufficient food for a healthy life" [3]. The problems of food safety can occur due to three main causes, pollution caused by microorganisms like bacteria, caused by chemicals used in manufacturing and food processing, and physical contamination caused such as dust, dirt and other. In less developed countries, many people are poisoned because of the consumption of foods produced under unhygienic conditions, lack of hygiene education, drought, contaminated waters, inappropriate food storage conditions, lack of cleaning, and pesticide residue [4]. Many regions of the Third World are still unable to increase their food production level to meet their fast increasing demand. Many regions are still constrained with low food self-

sufficiency levels. Around 20 percent of total population in developing countries are chronically undernourished [3].

1.2. Food Poisoning in Malaysia

Food poisoning can be defined as a situation where consuming a contaminated food or ingestion of contaminated food which can cause diarrhea, vomiting, nausea, discomfort, headache, dizziness and abdominal pain [5; 6]. This is also supported by Tartakow & Vorperian [7], whereby, gastrointestinal infection caused by a variety of toxic agents and bacteria, viruses, protozoa, parasites, fungi and other related causes when a person swallows contaminated food. By the end of 2011, more than 10% of 10,000 schools examined and as implemented by the Ministry of Housing and Local Government to the remises that handling food for the consumer. During 2011, there were 220 cases of food poisoning in schools and involving a total of 8,010 students throughout Malaysia. There are three conditions

detected in food poisoning cases, there are One Malaysia Milk Program is 97 cases, followed by cases in Selangor, Perak, Kedah, Penang, Johor, Melaka, Terengganu and Kelantan 3 cases respectively, and there is only one case occurred in Perlis. According to Tan et al.[8], in Malaysia, the majority of food poisoning cases occur in primary and secondary schools, with 53.4%, 62.7% and 67% in 2005, 2006 and 2007. Moreover, most recently, 50% of the food poisoning cases occurred in schools. Food Water Borne Disease (FWD) rising in the number of cases and incidence rate that happened in Malaysia from year 2000 to the year 2010 according to Table 1 and food poisoning is still high compared to other FWBDs in Malaysia from year to year. In addition, foodborne disease has caused illness to more than 56,000 people per year, creates high economic costs, loss of productivity and reduced quality of life for many citizens in the United States of America [9].

TABLE 1. Number of cases and Incident Rate every 100,000 population (IR) for PBMA from 2000 to 2010 in Malaysia

Year	Poisoning		Typhoid		Cholera		Dysentery		Viral Hepatitis A	
	Cases	(IR)	Cases	(IR)	Cases	(IR)	Cases	(IR)	Cases	(IR)
2000	8,129	34.9	765	3.3	124	0.5	447	1.9	-	-
2001	7,173	30.7	695	3.0	557	2.4	348	1.5	453	1.9
2002	7,023	28.6	853	3.5	365	1.5	292	1.2	295	11.0
2003	6,624	25.4	785	3.0	135	0.5	310	1.2	-	-
2004	5,957	23.3	484	1.9	89	0.4	356	1.4	107	0.4
2005	4,641	17.8	1,072	4.1	386	1.5	141	0.5	44	0.2
2006	6,938	26.0	204	0.8	237	0.9	105	0.4	64	0.2
2007	14,455	53.2	325	1.2	133	0.5	146	0.5	94	0.4
2008	17,322	62.5	201	0.7	93	0.3	92	0.3	36	0.1
2009	10,238	36.2	303	1.1	276	1.0	154	0.5	40	0.1
2010	12,519	44.2	210	0.7	443	1.6	104	0.4	39	0.1

Source: Department of Statistic Malaysia 2011

II. FACTOR INFLUENCING AWARENESS AND SITUATION AT SCHOOL CANTEENS IN MALAYSIA

1) Guidelines

Management of the environment and human health can be divided into two areas: management through legal methods and management through non-legal methods [10]. Environmental management by law can be divided into two parts, the environmental management through public law and environmental management through private law. The public law regulatory relationship between state and individual, while private law is a regulatory relationship between one individual to the other [11]. Examples of legal

documents that can be used for food safety problem is the Food Act 1983, the Local Government Act 1976, the Prevention and Control of Infectious Diseases Act 1988 (Act 342).

Examples of environmental management through non-legal methods including guidelines, codes of practice, monitoring, planning, public policy, education and research & development [10]. All the guidelines such as School Canteen guidelines not only required and practices by school canteen handler and school management but also required to the school principal, senior assistant teacher, canteen teacher, canteen committee, and also the health inspector, health officer whose monitor and check the school canteens.

2) *Monitoring*

Monitoring is one of the action that need to be followed and always taken to further improve and learn the effectiveness of the management system. To ensure quality and safe foods that only sold and to promote cleanliness, safety and beauty in school canteens, the situation of school canteens must be monitoring closely. Management of a school canteen is a shared responsibility of several parties either school principal, senior assistant, a member of the school canteen. Daily monitoring by canteen operators including monitored surrounding facilities provided and the food. Then the responsibility of the school principal are to ensure canteen license, ensure the surrounding of the school canteen, the facilities, and the food handlers, ensure a healthy of school canteen personnel certified by the Department of Health and other responsibilities. All the responsibilities assisted by daily canteen teachers in order to observed the school canteen every day. Then, the daily canteen teacher will do weekly reports and submitted to the school canteen and the school principle. Monthly reports will be sent to the District Education Office and subsequently reviewed by the District Health Office [12].

According to the Ministry of Health Malaysia, school health service is a service provided to pupils in the school in order to ensure optimal health care. This service started in the year 1967 and from 1975 onwards, the school health teams established to allow visits made to schools in Malaysia. In addition, monitoring of school canteens is not only focused on hygiene, but in terms of price monitoring food sales, the services also the responsibilities required of them by the school authorities which comprise the School Canteen Service Quotation [12].

3) *Awareness and Campaign*

Any programs, seminars, workshops, courses, posters are the ways to raise awareness. Awareness that applied not only to employers and employees of the school canteen, but to the school principal, senior assistant, daily canteen teachers, school management and students. Among the programs implemented as an example "Food Safety Education Programs View Taste Addiction" intended to enhance students' knowledge and awareness of food poisoning also exposing the students how to choose foods that are safe, nurturing practices and proper hand washing steps before and after eating. The activities in this program include by holding lectures, quizzes, demonstrations and posters.

School Health Services is one of the services provided by the Ministry of Health (MOH) to help school students throughout Malaysia government to ensure optimal health care. In addition to the program, the Ministry of Health Malaysia launched the portal of e-Community Food Safety Interactive Sites Club or CLICK MOH Ministry of Health. This is an initiative to help students to get information about

food safety. Through the "fan page" on MOH CLICK, school communities can interact with the health ministry about food safety in school. In addition, to create more clean and safe school canteens, the MOH has established a Clean School Canteen Award at the national level every year. Moreover, another food safety campaign are "Healthy Lifestyle Campaign", "Campaign of School Nutrition Practice" also the successful campaign at the national level for users, especially for the students and "Campaign for Food Safety Among Food Handlers" in the school for the school canteen.

4) *Knowledge*

Knowledge and education on food safety and hygiene is necessary for canteen operators, canteen workers, school management and students. For the students, an effort by the Ministry of Education which create Health Education for the Integrated Curriculum for Primary Schools (KBSR) and the Integrated Curriculum for Secondary Schools (KBSM) can help students increase their knowledge about health and healthy lifestyle. Moreover, for food handlers, the knowledge about food safety is very important with a formal education or pursuing various courses that provided by Ministry of Health Malaysia. This is to ensure the canteen operator can constantly strive to improve the level of food safety and hygiene in schools from time to time.

CONCLUSION

Awareness of food safety and food hygiene is very important in all human beings, which includes school canteen operator and food handlers in term of the food safety in the school canteen. Cases of food poisoning in schools can also be avoided if existing legislation are complied by all food handlers in the school canteen. Moreover, the factor that influencing awareness and situation at school canteens in Malaysia in terms of food safety issues such guidelines, monitoring, awareness and campaign, also knowledge must be focused and complied from time to time by food handlers, the school canteen operator, school principal and others. Therefore, effective management of school canteens and human health with the enforcement, adoption legislation, non legislation as well as guidelines then ensure a perfect human health to address the problem of food safety in school canteens and cause food poisoning cases.

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