# IMPACT FOOD SAFETY KNOWLEDGE, ATTITUDES AND PRACTICES (KAP) ON FLOATING HOTELS PERFORMANCE

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## ABSTRACT

*The research aims to know the impact food safety knowledge, attitudes and practices (KAP) on Floating hotels performance. With the growth in international travel and therefore, increasing demand on hospitality businesses, performance measurement in the hospitality industry has gained particular importance as a tool for effective decision-making. it identifies the areas of poor performance or opportunities so that better plans can be developed so it considered that aligning organizational performance through food safety is critical for the food business to stay competitive . the weak points in food safety on floating hotels and propose the development plan. This research is applied in 21 floating hotels in luxor and aswan . The research utilizes analytical tool is interview with the employee of food services at floating hotels. Findings clarify food safety has high impact on Floating hotels performance .*

**KEYWORDS:** Food Safety - knowledge, food safety attitudes, Food safety practices

## INTRODUCTION

Floating Hotels are a multifaceted industry with numerous job opportunities for both skilled as well as unskilled people. The Floating hotel sector has always been given considerable emphasis since it satisfies the requirement of a diverse group of people, whether they are tourists, businessmen, or common person who is of the home and is in need of a good place to stay. One of the most important elements of public health is food safety.

Therefore, what constitutes food of the most important in human life. So, all stakeholders in the world have been given by it since the dawn of history special care to ensure food safety. (Lawley; et al., 2008).

## 2) LITERATURE REVIEW

### 2-1 DEFINITION OF FOOD SAFETY

United States Department of Agriculture (2010) stated that food safety is the state of acceptable and tolerable risks of illness, disease, or injury from the consumption of foods. It is achieved through policies, research, regulation, standards, engineering designs and technology surveillance and monitoring and other applicable measures to reduce the risk or control hazard in the food supply chain. This includes all food and pre-food materials, starting with agricultural production and continuing through harvesting, processing manufacturing, storage, distribution, handling, preparation and any other activities up to the points of consumption that is the "farm-to-fork" continuum. The level of acceptable and tolerable risks from the consumption of foods is determined through a process called risk analysis.

### 2-2 IMPORTANCE OF FOOD SAFETY

There is no doubt that the food safety is of great importance because it provides supplied food safety and secures the conditions and actions through the production, processing, storage or distribution of food to ensure its safety or suitability for human consumption Safe Food is free from contaminants and risk and that does not cause injury or damage or disease of the human food in the long term or the short. Consumers' concerns and new food safety issues are the drivers for this heightened awareness although training alone may not be sufficient to improve food handler's safe food practices. Despite food safety training requirements 59% of reported foods borne illnesses have been traced back to commercial foodservice operations ( Gormley et al., (2011)

### 2-3 BENEFITS OF FOOD SAFETY

Food safety practices are important and there are many benefits. Consumers have a right to expect that those who supply the food that they buy have taken every care to manufacture products that will not harm them. Those with a responsibility for the regulation of the global food industry recognize this principle and legislate accordingly. This confers a legal and a moral duty, as well as an economic incentive, on all food businesses to ensure that the food they supply is as free from hazards as is practically possible. The food business that tries to avoid its responsibilities in this regard will not remain in business for very long (Lawley; et al., 2008).

### 2.5 FLOATING HOTELS

Consumers around the world are today willing to pay more for products and services offered by companies that show a real commitment to making a

positive environmental impact according to sales. They are also increasingly feeling the need to escape from their busy and overscheduled lives and want to embrace new forms of mobility that enable more freedom and greater contact with nature. The property offers its guests the luxury and amenities of a typical hotel along with the privacy of a single cabin without invading the natural environment around it (Pragle et al 2007).

### 2.5.1 FOOD SAFETY IN FLOATING HOTELS

Customers in a full-service restaurant may sit for a relatively long time, making seating comfort another important aspect of the physical setting. (Friedman, et al. 2004) concluded that, the factors that which influence the decisions of customers to dine at selected restaurants including hygienic or cleanliness, quality of the food, taste of the food, freshness of the ingredients, value for money, price and service also atmosphere of the restaurant. (Sulek and Hensley, 2004) added that performance is a major key for satisfaction after they investigated the impact of expectations, performance, and disconfirmation on satisfaction. The service quality is an antecedent of customer satisfaction, customer satisfaction has a significant impact on intention to purchase, and service quality has less impact on purchase.

## 2.6 FLOATING HOTEL PERFORMANCE MEASUREMENT

With the growth in international travel and therefore, increasing demand on hospitality businesses, performance measurement in the hospitality industry has gained particular importance as a tool for effective decision-making. The business environment in the hotel industry is characterized by fierce competition and constantly changing circumstances. Each hotel is in direct or indirect competition with every other hotel. Strong competition forces management to try to get closer to their guests wishes, since it is the only way to achieve success. Therefore, it's no wonder that hotel management is more and more committed to establishing Performance Measurement (PM) System in order to show, in the best possible way, which weaknesses are observed in the business and where the improvement could be made to be able to satisfy the needs of all stakeholders. PM is the process of quantifying actions, where measurement is the process of quantification and action leads to performance. (Haktanir, 2006).

Ivankovič, Janković and Peršić (2010) showed that this approach has numerous weaknesses such as short-termism, lack of balance and strategic focus, customers approach, performing of competition etc. Strongly criticized for providing a limited perspective on the performance of the company. As hotel industry is a people-oriented industry, non-financial indicators of PM are also important. They are valuable supplements to financial measures as they are expected to supply information that would improve the financial outcome and support and monitor the strategic

initiatives. The increasing recognition within the hotel industry of the importance and value of people, employees as well as guests. Therefore, the economic and financial success of a hotel depends on the attitude and behavior of employees, development of new products and services, as well as customer satisfaction. Hotel General and Department Managers must recognize equal importance to the goals of all stakeholders and not only of their shareholders. The achievement of objectives of all stakeholders (guests, employees, strategic partners, community etc.) can be measured by both financial and non-financial measures.

## 3) METHODOLOGY

The Research aims to know the Impact Food Safety Knowledge, Attitudes and Practices (KAP) on Floating Hotels performance for the purposes of ensuring that food is produced under appropriately hygienic conditions in a sample of Luxor and Aswan floating Hotels to examine the food safety knowledge , attitudes , and practices that influenced on these
Floating hotels and to reduce the likelihood of hazards that may adversely affect the safety of food, or its suitability for consumption. To obtain results that achieve the desired purpose of this research, it was conducted on five and four star hotels in Luxor and Aswan. According to the guide of Egyptian Hotel Association (EHA) (2012 –2016).
The floating hotels in Luxor and Aswan which chosen are 21 floating hotels in Luxor and Aswan . The prime reason for choosing these floating hotels is that the selected hotels belong to international and local chains; these hotels follow modern management and also follow practices and policies of food safety management more than any other type of hotels.

### RELIABILITY

Appropriate sample size of the study population was calculated using the Cochren, J. formula (Cochren, 1977)[1] as follows:

## Where:

**n**: appropriate sample size

**Z**: standard degree (1.96 at significant level of 0.05)

***p***: Sample proportion and neutral = 0.50

**e**: maximum allowed error (0.05 at significant level of 0.05)

Applying these values to the Cochren, J. formula reveals that the study sample size is 365 participants, but the researcher distributed 400

questionnaires. After analysis, there were 33 questionnaires not valid for analysis; the valid is (367) with the respondent rate of 91.75%.

**PERSONAL INFORMATION**

**Personal information:**

**Table (2): The Sample Characteristics Statistics**

| Variable | Response | Frequency | Percent | Rank |
|---|---|---|---|---|
| Gender | Male | 227 | 61.9 | 1 |
| | Female | 140 | 38.1 | 2 |
| | Total | 367 | 100.0 | - |
| Age | Less than 20 years | 56 | 15.3 | 5 |
| | From 20 to 30 years | 66 | 18.0 | 4 |
| | More than 30 to 40 years | 94 | 25.6 | 1 |
| | More than 40 to 50 years | 76 | 20.7 | 2 |
| | More than 50 years | 75 | 20.4 | 3 |
| | Total | 367 | 100.0 | - |
| Level of education | Secondary school education | 106 | 28.9 | 2 |
| | University or equivalent qualification | 161 | 43.9 | 1 |
| | Others (please, specify …….) | 100 | 27.2 | 3 |
| | Total | 367 | 100.0 | - |
| How long have you been in this floating hotel? | Less than 1 year | 86 | 23.4 | 3 |
| | From 1 to Less than 5 years | 84 | 22.9 | 4 |
| | From 5 to Less than 10 years | 98 | 26.7 | 2 |
| | More than 10 years | 99 | 27.0 | 1 |
| | Total | 367 | 100.0 | - |
| Howmany Food Safety training Courses do you participate per year ? | One program | 99 | 27.0 | 3 |
| | Two programs | 106 | 28.9 | 2 |
| | Three programs | 107 | 29.1 | 1 |
| | None | 55 | 15.0 | 4 |
| | Total | 367 | 100.0 | - |

According to Sector, the results in Table ( 2) showed that the percent of males(61.9%) was more than females(38.1%) of investigated sample.

According to respondents' age, the majority of the respondents were More than 30 to 40 years (25.6%), followed by More than 40 to 50 years(20.7%), followed by More than 50 years (20.4%). followed by From 20 to 30 years (18%), followed by Less than 20 years (15.3%).
According to respondents' Level of education, the majority of the respondents had University or equivalent qualification (43.9%), followed by Secondary school education(28.9%), followed by Others (27.2%).
According to The duration of the work in the floating hotel , results showed that the precent of More than 10 years (27 %), followed by From 5 to Less than 10 years (26.7%), followed by Less than 1 year (23.4%), followed by From 1 to Less than 5 years (22.9%).
According to number of Food Safety training Courses, results showed that the percentage of three programs (29.1 %), followed by Two programs (28.9%), followed by One program (27%), while (15%) don't participate any Safety training Courses per year.

**Table ( 3 ): Reliability Analysis of Research Variables.**

| ***The Axes*** | ***No. of statements*** | ***Alpha Coefficient*** |
|---|---|---|
| *Food safety knowledge* | *14* | *.83* |
| *Food safety attitudes* | *7* | *.65* |
| *Food safety practices* | *13* | *.649* |
| *Benefits of Food safety* | *17* | *.635* |
| *Hotel Performance* | *13* | *.672* |
| *The Overall Cronbach's Alpha* | *64* | *.786* |

According to Sürücü and Maslakçi (2020) reliability is the used measuring instrument stability and its consistency. Gliem and Gliem (2003) pointed that Cronbach's α reliability coefficient usually ranges between 0 and 1; they also referred to variables more than 0.6 were acceptable. Reliability of current study variables were tested by Cronbach's alpha coefficient; all axes were acceptable. The Overall Cronbach's Alpha exceeded 0.6 for the variables; this means that all variables were acceptable and reliable (see table, ).

**BENEFITS OF FOOD SAFETY**

**Table (4): Factor Analysis of the Benefits of Food safety**

| Benefits of Food safety | Loading |
|---|---|
| Cleaning The kitchen counters well after all preparation activities | 0.602 |
| Using separate knives for meat, vegetables and fruits | 0.992 |
| Clean and sanitize preparing boards and utensils before using | 0.988 |
| During tasting of food do you make sure to use clean and dry spoon each | 0.984 |
| Separate between raw food and cooked food contact surfaces time. | 0.955 |
| Reduced product wastage | 0.684 |
| Increased product shelf life | 0.644 |
| Prevent food poisoning | 0.976 |
| Increased product sales | 0.624 |
| Reduced production costs | 0.667 |
| Reduction in complaints | 0.677 |
| Increased ability to retain existing customers | 0.729 |
| Increased ability to access new overseas markets | 0.659 |
| Improved image with customers | 0.987 |
| Increased customer confidence | 0.984 |
| Increased product quality | 0.984 |
| Improved relations with communities | 0.958 |
| Increased market share | 0.61 |
| Maintained/increased profit margin | 0.992 |
| Increased productivity | 0.988 |
| Sums of Squared Loadings | 0.994 |

The factor analysis shown in Table ( 4) stated that all the all statements (20 statements) were responsible for Benefits of Food safety with a percentage of (99.4)

**Table (5): Statistics for the Benefits of Food safety**

| Benefits of Food safety | Mean* | SD | Sig. | Rank |
|---|---|---|---|---|
| Cleaning The kitchen counters well after all preparation activities | 3.54 | 1.219 | .000 | 8 |
| Using separate knives for meat, vegetables and fruits | 3.42 | 1.404 | .000 | 10 |

| | | | | |
|---|---|---|---|---|
| Clean and sanitize preparing boards and utensils before using | 3.65 | 1.205 | .000 | 1 |
| During tasting of food do you make sure to use clean and dry spoon each | 3.26 | 1.339 | .000 | 14 |
| Separate between raw food and cooked food contact surfaces time. | 3.63 | 1.247 | .000 | 2 |
| Reduced product wastage | 3.61 | 1.244 | .000 | 4 |
| Increased product shelf life | 3.51 | 1.237 | .000 | 9 |
| Prevent food poisoning | 3.39 | 1.402 | .000 | 11 |
| Increased product sales | 3.23 | 1.422 | .000 | 15 |
| Reduced production costs | 3.31 | 1.394 | .000 | 12 |
| Reduction in complaints | 3.60 | 1.251 | .000 | 5 |
| Increased ability to retain existing customers | 3.59 | 1.263 | .000 | 6 |
| Increased ability to access new overseas markets | 3.55 | 1.230 | .000 | 7 |
| Improved image with customers | 3.42 | 1.409 | .000 | 10 |
| Increased customer confidence | 3.63 | 1.206 | .000 | 2 |
| Increased product quality | 3.27 | 1.340 | .000 | 13 |
| Improved relations with communities | 3.62 | 1.242 | .000 | 3 |
| Increased market share | 3.54 | 1.219 | .000 | 8 |
| Maintained/increased profit margin | 3.42 | 1.404 | .000 | 10 |
| Increased productivity | 3.65 | 1.205 | .000 | 1 |
| Overall | 3.4882 | .41026 | .000 | - |

Table (5 ) viewed that concerning Benefits of Food safety, the first variable was “Increased productivity ", where the mean value was (3.65) and the standard deviation was(1.20). On the other hand, the least variable was “Increased product sales", where the mean value was(3.23) and the standard deviation was(1.42). The overall mean of the variables was(3.48), the standard deviation of means values was(.41).

The p-value of the one-sample T-test is (0.000) which indicates that there are significant differences between Benefits of Food safety and the test value (4). In other words, respondents’ awareness of all statements is less than the test value.

**HOTEL PERFORMANCE**

**Table (6): Factor Analysis of the hotel performance**

| Hotel Performance | Loading |
|---|---|
| Achievement of the objectives | .932 |
| Quality of service. | .667 |
| Customer satisfaction. | .981 |
| Adaptation to the needs and preferences of markets. | .631 |
| Image of company and its products | .612 |
| Communication with customers. | .658 |
| Occupancy rate | .698 |
| Sales growth. | .760 |
| Profitability | .981 |
| Workers' motivation. | .664 |
| Retention of essential employees. | .646 |
| Personal and work relationships among employees | .638 |
| Commitment of the employees to the organization. | .933 |
| Sums of Squared Loadings | .884 |

The factor analysis shown in Table ( 6) stated that all the all statements (13 statements) were responsible for Hotel Performance with a percentage of(88.4% ).

**Table (7): Statistics for the hotel Performance**

| Hotel Performance | Mean* | SD | Sig. | Rank |
|---|---|---|---|---|
| Achievement of the objectives | 3.54 | 1.219 | .000 | 7 |
| Quality of service. | 3.42 | 1.404 | .000 | 9 |
| Customer satisfaction. | 3.65 | 1.205 | .000 | 1 |
| Adaptation to the needs and preferences of markets. | 3.26 | 1.339 | .000 | 12 |
| Image of company and its products | 3.63 | 1.247 | .000 | 2 |
| Communication with customers. | 3.61 | 1.244 | .000 | 3 |
| Occupancy rate | 3.51 | 1.237 | .000 | 8 |
| Sales growth. | 3.39 | 1.402 | .000 | 10 |
| Profitability | 3.23 | 1.422 | .000 | 13 |
| Workers' motivation. | 3.31 | 1.394 | .000 | 11 |

| | | | | |
|---|---|---|---|---|
| Retention of essential employees. | 3.60 | 1.251 | .000 | 4 |
| Personal and work relationships among employees | 3.59 | 1.263 | .000 | 5 |
| Commitment of the employees to the organization. | 3.55 | 1.230 | .000 | 6 |
| Overall | 3.5016 | .41782 | .000 | - |

Table(7 ) viewed that concerning hotel Performance, the first variable was "Customer satisfaction ", where the mean value was (3.65) and the standard deviation was(1.20). On the other hand, the least variable was "Profitability", where the mean value was(3.23) and the standard deviation was(1.42). The overall mean of the variables was(3.50), the standard deviation of means values was(.41).

The p-value of the one-sample T-test is (0.000) which indicates that there are significant differences between hotel Performance and the test value (4). In other words, respondents' awareness of all statements is less than the test value.

## FINDINGS

- Chefs of visited hotels have poor food safety attitudes and practices. This is exemplified in the following critical food safety mistakes:

- No regular checking of incoming food items.
- No use of thermometer to check and control food temperature
- No use of separate equipment for handling uncooked food items
- Less use of protective clothing
- No regular cleaning and sanitization of surfaces
- Rubbing and scratching heads and nose while preparing food
- Incorrect thawing process that causes spoilage of raw food
- No covering of cooked food that make it exposed to insects and dust
- Kitchen staff of visited hotels have poor knowledge as they are unaware of the basic food safety information such as the following:
- The correct place of storing uncooked food in fridges
- Time taken for bacteria to multiply
- Factors leading to bacteria growth in food
- Causes of food contamination
- As a result of the current tourism crisis and low profitability, hotels' managers are unable to assign a budget for purchasing protective clothing and separate tools and utensils for handling uncooked food to ensure food safety application. Moreover, shortage in finance

impedes the implementation of pest control and maintenance programs.

- Food safety training courses are effective but they lack a regular refreshment program to remind kitchen staff with the most significant food safety KAP and update them with recent food safety technology

## RECOMMENDATIONS

* Floating Hotels managers should consider giving one or two employees primary responsibility for HACCP implementation since this reduces challenges to improving food safety practices. all individuals involved in food production will need to have training in food safety and HACCP.

*From time to time, managers should evaluate and review the training programs of food safety practices to meet the food and beverage employees' expectations

* Floating Hotels should designation Hygiene Manager and Hygiene Supervisor to strengthen food safety supervision in the hotels.

* Floating hotels should have an effective food safety training strategy for food handlers to improve and update their food safety KAP .

*Floating hotels should effectively prepare and perform food hazard analysis; establish HACCP plan; update preliminary documents and programs.

*Floating hotels should monitor on applying good personal hygiene practices; cross-contamination prevention and sanitation practices. They should also monitor on applying food receiving, storage, thawing, cooking and reheating practices; food production time, and temperature practices effectively.

## REFERENCES

Friedman, C. R., et al. (2004). Risk factors for sporadic campylobacter infection in the United States: A case-control study in Food Net sites. Clinically Infectious Diseases, 38(3) 285–296.

Gormley, F., Little, C., Rawal, N., Gillespie, I., Lebaigue, S. and Adak, G. (2011). A 17-year review of foodborne outbreaks: Describing the continuing decline in England and Wales (1992-2008). Epidemiology and Infection, 139 (5), pp. 88- 99.

Haktanir, M. (2006). Performance measurement in independent hotels. In P.J. Harris and M. Mongiello (Eds.), Accounting and ¬ nancial management: Developments in the international hospitality industry (pp. 3-21).

Ivankovič, G., Janković, S., & Peršić, M. (2010). Framework for performance measurement in hospitality industry: Case study Slovenia. Economic research, 23(3), 12-23.

Lawley R., Curtis L., and Davis J., (2008). The food safety hazard Guide book. food safety info, London, UK. Published by The Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge CB4 0WF, UK., pp. 98–99.

Pragle, A. S., Harding, A. K., & Mack, J. C. (2007). Food workers‟ perspective on hand washing behaviours and barriers in the restaurant environment. Journal of Environmental Health. 69(10), 27-32.

United States Department of Agriculture. (2010). Refrigeration and food safety. Safe Food Handling. Available from http://www.fsis.usda.gov/fact_sheets/Refrigerati on&food Safety/index.asp (Accessed 27 July 2019)