

The Impact of Food Safety Awareness, Knowledge and Attitude on Consumer Safety Practices

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Abstract

Food safety refers to controlling, preparing, and storing food to limit foodborne illness risk, and it's a global concern. Consumers sometimes buy foods from supermarkets without knowing the safety and quality of the food or mishandle food at home. However, consumers frequently lack understanding regarding food safety and risk-reducing practises and consumers are frequently the focus of interventions to address these gaps, but a global, comprehensive analysis of these initiatives by type, location, and outcome is currently lacking. This study aimed to study the relationship between food safety awareness, food safety knowledge and food safety attitude impacting food safety practices (KAP) among supermarket's consumers in Klang Valley. This study had collected 401 respondents from Klang Valley area. Statistical Package Social Sciences Software (SPSS) and SmartPLS was used to analyse the data. Results of the study had shown that food safety awareness, food safety knowledge, food safety attitude have impact towards the food safety practices and it was found that food safety attitude is the mediator between food safety awareness and food safety knowledge towards the food safety practices. Results suggested that food safety is the responsibility of governments, food producers, food industrialists, and consumers. The government's responsibility in this regard is to implement effective, extensive, and systematic food control. The consumer is the final point of contact with food consequently, their awareness, knowledge, attitude, and practise of food safety play significant roles in outbreaks of foodborne diseases.

Keywords: Food Safety, Awareness, Knowledge, Attitude, Consumer, Safety Practices, HACCP

INTRODUCTION

According to World Health Organization (WHO), the globalization of the food supply has led to the rapid and extensive global distribution of foods. Many of the outbreaks on foodborne diseases go unrecognized or unreported plus are not investigated. 1 in 10 people fall ill after eating contaminated food worldwide and it is recorded that 420 000 people die every year due to eating contaminated food globally which resulted 125 000 were children under 5 years of age. Based on the World Bank Report on 2021, it shows that the estimated annual cost of lost output due to foodborne infections in low- and middle-income nations is US\$110 billion (WHO, 2022).

The issue of the food safety has increases due to the growth of science and technology because it is stated that there are many hazardous foods caused by the food chemical that contained in daily food products. Consumers Association of Penang had revealed that Malaysians buying food products that are contain with toxic components that may be harmful for the consumers because it could contribute to cancer or kidney failure and even foodborne illnesses if the food does not well prepared (Fernandez et. al, 2018). It was estimated that the foodborne disease had triggered 600 million cases and 420 000 deaths annually of which (30%) were mortalities among children below age under 5 years old. In Malaysia, it had been identified that the main factor that contributing the foodborne diseases is the lack of cleanliness and insanitary food handling practices among the food handlers which had contribute to (50%) of poisoning incidents (Soon et. al, 2020).

According to data from the MOH, 288 cases of food poisoning were documented in 2020, and 123 more through September 2021. As a result, it is the job of the Food Quality and Safety Programme to make sure that the raw materials and food sold at local markets comply with the Food Act 1983. Following the surveillance by the Ministry of Health (MOH) from 2018 to August 2021, 2,654 out of over 45,000 food samples and raw goods, such as meat, fish, vegetables, and fruits from the local markets, were evaluated, according to the Ministry of Health. It was discovered that (5.9%) of the samples violated the Food Act of 1983 and the Food Regulations of 1985. According to figures from the Housing and Local Government Ministry, in 2021, local authorities investigated 273 public markets around the nation because the general public frequents these marketplaces for their everyday needs (MOH, 2022).

LITERATURE REVIEW

Food Safety Attitude towards Food Safety Practices

The positive correlation is supported by many theories such as the incompatible link between knowledge of household women with their attitude and practices plus the disposition to modify the behaviour is influenced by their attitude. Findings shows that there is a significant relationship between attitude and practices (Naeem, 2018). High levels of knowledge, attitudes, and self-reported actions demonstrated that the researcher stated that attitude was a key factor in influencing food safety procedures, and that knowledge and attitude have a significant association that suggests they are the traits that independently influence food safety practises (Soon et al. 2020).

Food Safety Awareness towards Food Safety Attitude

Total indirect had influence the food safety attitudes or organic labelling awareness on these objectives was found significant. In addition, attitudes toward food safety explained (51.8%) of the total indirect influence on intentions to purchase organic foods (Wong, 2021). A predictive correlational study evaluated the street food vendors' resources, knowledge, attitudes, and level of compliance with the Implementing Rules and Regulations (IRRs) regarding food safety and cleanliness found awareness and attitude had a moderating effect on compliance with IRRs on food safety and sanitation and were a decisive factor. Instead,

awareness was a greater predictor of compliance with sanitation IRRs than resource availability (Palapar, 2022). According to a recent study, food safety awareness is influenced by gender, age, and level of education, and female respondents scored higher on all measures of food safety knowledge. In addition, based on their awareness of food safety, the majority responded positively to questions on food safety practises (Ayad, 2022).

Food Safety Awareness towards Food Safety Practices

Although consumer knowledge of quality standard is increasing, there is still a need to increase consumer awareness of their existence and the information they provide regarding food quality and safety, according to the conclusions of the investigation. Although consumers are aware of quality markers, their familiarity with them remains inadequate. When making purchases, consumers examine product quality, pricing, quality certification, and ecological certification (Rosak, 2019). According to the findings of the study, factors such as halal awareness, health, and perceived value had a significant and positive effect on the purchasing decisions of consumers. This indicates that consumer interest in purchasing halal food products is increasing due to a greater understanding of the halal status of products, their health, and their perceived value. The outer loading value is subsequently calculated by an analysis of the measurement model, which additionally evaluates the relationship between the construct variables and the manifest indicators. According to a study, food safety, halal awareness, halal certification, halal marketing, and brand image all have a (70%) influence on purchase intention, and variables connected to food safety have an indirect influence on purchasing interest via health (Purwanto, 2021). There is a substantial association between respondents' knowledge of food hygiene regulations (FHR) and their food cleanliness practises, Personal hygiene had the highest Cronbach's alpha value, with a value of 0.836, and level of FHR awareness has acceptable reliability based on the recent study (Azizi, 2021).

Food Safety Knowledge towards Food Safety Attitude

In 2020, research demonstrated substantial favourable relationships between food workers' food safety knowledge, attitude, and practises (Ncube et al., 2020). Another research revealed that food handlers' food safety knowledge had significant beneficial effects on their commitment to food safety, and that the association between food safety knowledge and attitude is statistically significant (Taha et al. 2020). A study was conducted in 2020 with the purpose of examining college students' knowledge, behaviour, and attitudes towards food safety in the city of Gondar. A cross-sectional survey was conducted and it was discovered that college students' general knowledge, behaviour, and attitudes towards food safety were extremely low, food safety procedures among the students were independent of attitude, and there was a substantial correlation between knowledge and practise. According to their disparities in department, food safety training, and academic year, this finding revealed a statistically significant difference in the students' food safety understanding. On the basis of the general attitude questions, just (29.1%) in this survey held a positive view of food safety. Other research has showed that positive attitudes motivate food handlers to boost the

effectiveness of their food safety measures more than education and experience (Azanaw, 2021).

Food Safety Knowledge towards Food Safety Practices

The empirical findings supported the hypotheses that food handlers' attitudes are highly influenced by their understanding of hygienic-sanitary conditions for food safety, and that attitudes favourably influence their adherence to these conditions (Kwol, 2019). The evaluation of food handlers in Debre Markos Town, Northwest Ethiopia, in terms of their knowledge, practises, and related factors was concluded in 2020. Only (34.1%) had a comprehensive awareness of food safety, and approximately (54%) had proper food handling practises. Education level, food safety training, and favourable attitudes toward food safety were among the factors associated with food safety knowledge. Similarly, education, knowledge, and work experience were favourably associated with good food handling practises (Alemayehu et. al, 2021).

Food Safety Attitude mediates between Food Safety Awareness towards Food Safety Practices

The attitude of food handlers is supported by sufficient empirical evidence in relation to their kitchen hygiene, as presented and confirmed by a study's premise. In addition, the hypothesis proposing a direct effect on food handlers obtained sufficient support based on their disease control measures. In addition, the study demonstrates that the attitude of food handlers toward kitchen hygiene mediates the association between their knowledge of food safety and their personal cleanliness. The results indicate that the disease control measure was a significant partial mediator between food safety knowledge and kitchen hygiene (Kwol, 2019). A vast majority of food handlers exhibited positive attitudes toward food safety and adhered to excellent food safety procedures (FSP), but they lacked fundamental food safety knowledge (FSK). Among the demographic characteristics of food handlers, level of education, professional category, current employment tenure, and overall experience in the food service sector were significant predictors of FSK, FSA, and FSP. FSK was shown to be moderately to highly correlated with FSP of food handlers, whereas FSA was found to be significantly correlated with FSP. Except for gender, the FSP of food handlers was shown to be significantly linked with all other demographic variables. Food employees' FSK and FSP showed a substantial positive association (Ahmed et. al 2021).

Food Safety Attitude mediates between Food Safety Knowledge towards Food Safety Practices

It shows that food safety attitudes, knowledge, and behaviours mediate. Food-safety knowledge, attitudes, and practises were average. Work experience, education level, and

employee satisfaction predicted food handlers' knowledge, attitudes, and practises. Except for nationality, all independent variables correlated with one or more dependent variables and food safety knowledge affects attitudes and practises (Siau, 2015; Wandee, 2021). Research in Lebanon found little association between students' food safety awareness and food handling habits Due to the significant link between knowledge, attitude, and practise, a multiple regression analysis was done. Multiple regression analysis shows a high positive relationship between knowledge, attitude, and practise. In addition, (29.1%) of the effect of knowledge on practise was mediated, whereas (70.9%) was direct (Dimassi, 2014; Al-Kandari et al. 2019, Kang et al. 2010; Osei et al. 2020). Another study the attitude mediated practice-based knowledge like and the second hypothesis that attitude mediates knowledge-to-practise was supported and had also found that food safety attitude mediates the effect of knowledge on practise (Chuan Kuo, 2020; Sayuti et al., 2020).

Conceptual Framework

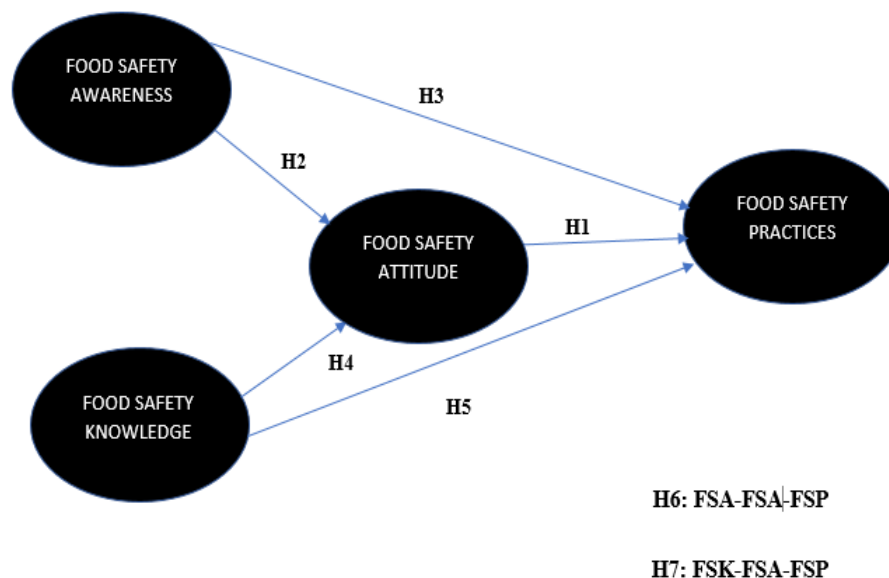


Figure 1: Conceptual framework adapted from (Soon et. al, 2020 & Sayuti et.al 2020).

Methodology

Non-probability sampling and convenience sampling was used in this study as a sampling technique for the research design. The target population of this study is supermarket's consumers among Klang Valley. Based on the UN World Urbanization Prospects, it is estimated that the number of populations in Klang Valley in 2021 is 7,996,830. Researcher used Krejcie and Morgan sampling table as a reference in determining the sample size and the closest number of populations is 1000000 meaning that the number of respondents is 384 (Krejcie & Morgan, 1970). The number of respondents that were collected exceeds 401 was fully

administrated by online survey. The data of information was analysed using computerize statistical software which is Statistical Package for the Social Sciences SPSS and SmartPLS.

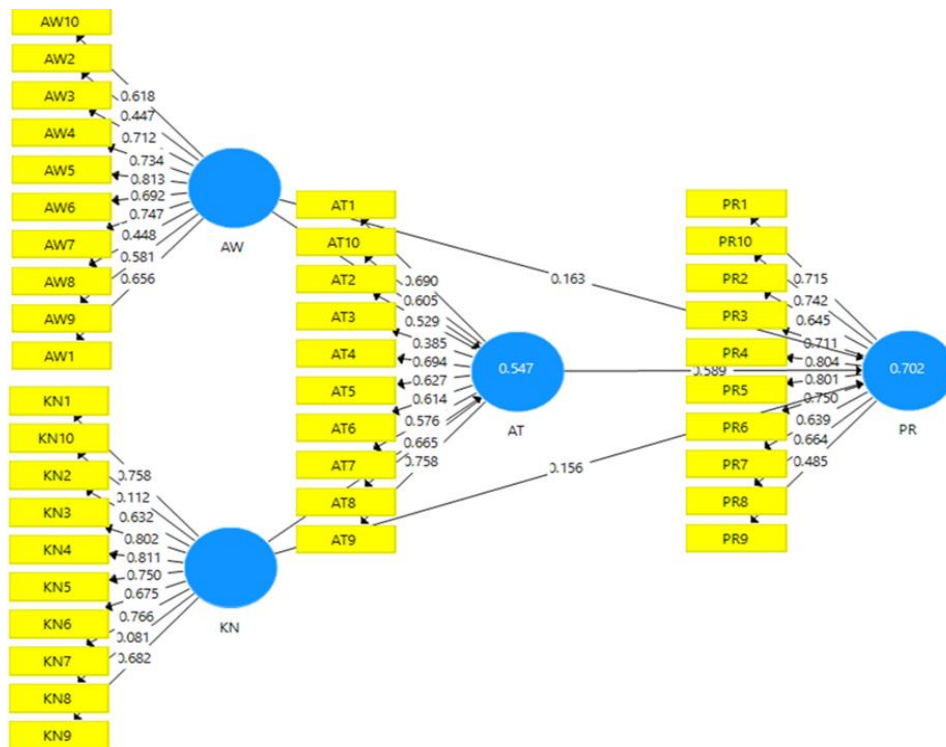
Table 1: Questionnaire development

Section	Variable	No item	Source
A	Demographic	6	TP Lim, (2016)
B	Food Safety Awareness	10	Sayuti et.al, (2020)
C	Food Safety Knowledge	10	Sayuti et.al, (2020), Soon et.al, (2020).
D	Food Safety Attitude	10	Bülent Ergönül, (2013), Sayuti et. al (2020)
E	Food Safety Practices	10	N. Sanlier, (2010)

Table 1 explain the questionnaire development were consisted of five sections divided and each item were extracted chosen the most suitable questionnaire from previous study was developed through the adaptation process the questionnaire used 6-points of scale for each part because it can be averaged together. Moreover, an even number of items in the response scale can be yield in groupings that are easier to understand and discuss. Therefore, few previous studies had been used as the references in developing the questionnaire, which is from TP Lim, (2016); Sayuti et.al, (2020); Soon et.al, (2020); Bülent Ergönül, (2013); N. Sanlier, (2010).

Findings

Figure 2: Path model of latent variables



Respondents' Profile

Table 2: Respondents' Demographic Profile

Item	Frequency	Percentage (%)
Gender		
Male	198	49.4
Female	203	50.6
Age		
18-20	31	7.7
21-30	213	53.1
31-40	69	17.2
41-50	41	10.2
51 and above	47	11.7

Marital		
Single	257	64.1
Married without children	37	9.2
Married with children	96	23.9
Other	11	2.7
Education		
Primary school	16	4.0
Secondary school	81	20.2
Diploma	103	25.7
Degree	161	40.1
Postgraduate	30	7.5
Other	10	2.5
Occupation		
Student	95	23.7
Own Business	76	19.0
Unemployed	29	7.2
Government employee	52	13.0
Private employee	142	35.4
Other	7	1.7
Occupation Background		
Food	104	25.9
Non-food	297	74.1
Total	401	100

As stated in the table 2 above, most survey respondents were female, with 203 females (50.6%). Male respondents total 198, or (49.4%). The table above reveals that responders aged 21-30 make up 53.1% of the total. The next largest age group was 31-40, with (17.2%) of responders, followed by 51+ (11.7%), 41-50 (10.2%), and 18-20 (7.7%). In terms of marital status, more over half of the survey's 257 respondents were single (64.1%), while (23.9%) were married with children 96 respondents. Married without children respondents make up (9.2%) compared to others with 11 (2.7%). Regarding respondents' education, (40.1%) 161 have a degree. Followed by diploma holders (25.7%), 103 and secondary school graduates (20.2%), 81. Postgraduate or master's degree 30 respondents, (7.5%) and primary school 16 respondents,

(4.0%). Other level has the fewest respondents (2.5%). 142 (35.4%) of respondents were private employees. Followed by students (23.7%), 95 and company owners (19.0%), 76. (7.2%) of respondents are unemployed, whereas (1.7%) are underemployed. In terms of respondents' occupations, (74.1%) were non-food related 297 respondents and (25.9%) were food-related 104 respondents.

Model Development Evaluation

Table 3: Results of model development evaluation

		Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Attitude	AT1	0.790	0.682	0.065	10.681	0.000
	AT2	0.829	0.530	0.045	11.756	0.000
	AT3	0.785	0.382	0.062	6.183	0.000
	AT4	0.894	0.695	0.029	23.899	0.000
	AT5	0.827	0.625	0.056	11.180	0.000
	AT6	0.714	0.616	0.047	13.169	0.000
	AT7	0.876	0.575	0.057	10.060	0.000
	AT8	0.865	0.666	0.040	16.456	0.000
	AT9	0.758	0.759	0.043	17.771	0.000
	AT10	0.805	0.602	0.059	10.327	0.000
Awareness	AW1	0.756	0.653	0.051	12.945	0.000
	AW2	0.847	0.444	0.065	6.905	0.000
	AW3	0.712	0.708	0.044	16.306	0.000
	AW4	0.734	0.724	0.057	12.872	0.000
	AW5	0.813	0.809	0.032	25.061	0.000
	AW6	0.792	0.693	0.042	16.589	0.000
	AW7	0.747	0.744	0.033	22.726	0.000
	AW8	0.848	0.451	0.038	11.736	0.000
	AW9	0.781	0.580	0.050	11.723	0.000
	AW10	0.818	0.616	0.050	12.478	0.000
Knowledge	KN1	0.758	0.752	0.052	14.456	0.000
	KN2	0.832	0.633	0.041	15.247	0.000
	KN3	0.802	0.795	0.046	17.508	0.000
	KN4	0.811	0.803	0.047	17.308	0.000
	KN5	0.750	0.744	0.053	14.269	0.000
	KN6	0.775	0.674	0.045	14.881	0.000
	KN7	0.766	0.765	0.063	12.169	0.000
	KN8	0.881	0.091	0.072	1.122	0.000
	KN9	0.882	0.680	0.044	15.536	0.000
	KN10	0.812	0.119	0.064	1.735	0.000
Practices	PR1	0.715	0.710	0.045	15.723	0.000
	PR2	0.845	0.639	0.048	13.511	0.000
	PR3	0.711	0.709	0.041	17.230	0.000
	PR4	0.804	0.799	0.038	21.106	0.000
	PR5	0.801	0.798	0.034	23.317	0.000

AVE= 0.892	PR6	0.750	0.749	0.039	19.095	0.000
	PR7	0.839	0.639	0.040	16.086	0.000
	PR8	0.764	0.661	0.050	13.339	0.000
	PR9	0.885	0.485	0.043	11.165	0.000
	PR10	0.742	0.738	0.059	12.590	0.000

Based on the table 3 above, part 2 consists of 10 items measuring the awareness of food safety among supermarket consumers shows the reliability value of 0.846. Next part assesses on the 10 items related to knowledge of supermarket consumer produced the reliability value of 0.828. Part 4 which related to the attitude of the supermarket consumers toward food safety with 10 items and demonstrated an overall alpha 0.820. Lastly, Part 5 which related to the practices of supermarket consumers towards food safety resulted with an Alpha coefficient of 0.883 with a total of 10 items measured.

All of the above values are adequate and reliable because the scores are greater than 0.60. (Traub & Rowley, 1991; Orhan, 2022; Osman, 2022). Furthermore, an Alpha coefficient of 0.70 or higher is often deemed adequate and dependable when assessing an individual's attitude toward certain things or objects (Pierre-Yves Philippe, 1996; Kimberlin & Winterstein, 2008; Mostafa, 2022). As a result, the questionnaire employed in this study is thought to have a high level of internal consistency, also known as dependability. It is also estimable that, despite the fact that the current study only included a few questions, the instrument's dependability was enough.

Thresholds for composite reliability are up for debate (a reasonable threshold can be anywhere from .60 and up), with different authors offering different threshold suggestions and what is on the scale has a significant impact. Smaller numbers of scale items tend to have lesser reliability than greater numbers. In *Scaling Procedures: Issues and Applications*, Richard Netemeyer and colleagues say it is "realistic" for a five- to eight-item construct to reach a .80 criterion. From the results above, we could see all the composite reliability for the constructs ranges from 0.860 to 0.905, which exceeds 0.80. A clear indication that all the items consistently measure their corresponding construct.

An AVE of 0.50 is recommended for adequate convergent. An AVE below 0.50 suggests that items explain more errors than construct variance. Each construct's AVE must be at least 0.50 for any measuring model. From the results below, we could see all the average variance extracted (AVE) for the constructs ranges from 0.860 to 0.905, which exceeds 0.50.

Raykov's rho ranges from 0 to 1 like Cronbach's alpha. Higher values indicate more accurate scales. A rho of 0.8 suggests high internal consistency, whereas 0.7 is adequate (Cicchetti, 1994; Karin, 2018; Alejandro, 2022). From the results above, we could see all the values for the constructs rho ranges exceeds 0.80. A clear indication that all the items consistently measure their corresponding construct.

DISCRIMINANT VALIDITY

Table 4: Fornell- Larcker result of food safety awareness, food safety knowledge and food safety practices.

	AW	KN	PR
AW	0.655		
KN	0.803	0.661	
PR	0.701	0.709	0.701

Based on table 4, a structural equation modelling approach was used to measure relationships between food safety awareness (AW), food safety knowledge (KN) towards food safety practices (PR). This method was applied as it tests structural and measurement models and provides a complete analysis for inter-relationships in a model. Discriminant validity of the construct is achieved when the square root of the AVE is greater than the correlation between the constructs (Zainudin, 2014; Salleh, 2016; Rönkkö, 2022). Based on the table above, it shows that the values of each validity constructs were in range value between 0.655 to the value of 0.701.

Using Fornel and Larcker the discriminant validity was determined by comparing the square root of each AVE in the diagonal to the correlation coefficients (off-diagonal) for each construct in applicable rows and columns Overall, the discriminant validity of this can be accepted in the model of measurement that supports the discriminant validity between the constructs (Fornel & Larcker, 1971; Hamid et. al, 2017).

HTMT

Table 5: Heterotrait-Monotrait Ratio (HTMT) values of food safety awareness, food safety knowledge and food safety practices.

Heterotrait-Monotrait Ratio (HTMT)			
	AW	KN	PR
AW	-	-	-
KN	0.914		
PR	0.783	0.789	

Table 5 above shows the values of food safety awareness, food safety knowledge and food safety practices. The HTMT value between food safety awareness towards food safety knowledge resulted at 0.914. The HTMT value between food safety awareness towards food safety practices resulted at 0.783. In addition, the result also shows the HTMT value of food safety knowledge towards the food safety practices is at 0.789.

Based on prior research and their simulation study results had suggested a threshold value of 0.90 if the path model includes constructs that are conceptually similar (e.g., affective satisfaction, cognitive satisfaction, and loyalty); that is, an HTMT value above 0.90 depicts a lack of discriminant validity. However, when the constructs in the path model are conceptually more distinct, researchers should consider 0.85 as threshold for HTMT (Henseler et al. 2022).

Structural Model

In the parts that follow, detail of the tests that were conducted to assess whether or not the structural model used in this study is accurate. The structural model's validity is determined by computing the coefficient of determination (R²) and the path coefficients. Additionally, the mediation links proposed by the study model are evaluated of this research. The rules suggested the implemented and Sobel's test is utilised in order to evaluate the mediation and the importance of the mediated relationships (Baron and Kenny, 1986; Singh, 2020; Wickramarachchi, 2022)

Coefficient of Determination (R²)

R² is the amount of variance in the dependent variables that can be explained by the independent variables. As a result, the structural model's potential for prediction is increased due to a higher R² value. In this study, the R² values are derived from the SmartPLS algorithm function, whilst the t-statistics values are derived from the SmartPLS bootstrapping function. Throughout this study, the bootstrapping method generated a total of 5000 samples from 401 distinct situations.

Assessment of Coefficient of Determination [R² value]

Table 6: Assessment of Coefficient of Determination [R² value]

	R Square	R Square Adjusted
AT	0.547	0.545
PR	0.702	0.700

Table 6 above shows the R square values of food safety attitude and food safety practices. R Square statistics explains the variance in the endogenous variable explained by the exogenous variables. The results show that the R² values of the food safety attitude is 0.547 which is moderate and the R² values of the food safety practices shows that the value was 0.702 which is substantial. This would mean that (54.7% and 70.2%) change can be explained by the variables.

Author recommended that R² values should be equal to or greater than 0.10 in order for the variance explained of a particular endogenous construct to be deemed adequate (Falk and Miller, 1992; Victor, 2022). It is also suggested that R² values for endogenous latent variables are assessed as follows 0.26 (substantial), 0.13 (moderate), 0.02 (weak) (Cohen, 1988; Diogo, 2022).

Researcher also recommended R2 values for endogenous latent variables based on 0.67 which is substantial, 0.33 falls into moderate and 0.19 categorize as weak (Chin, 1998; Joseph, 2022). In scholarly research that focuses on marketing issues, R2 values of 0.75, 0.50, or 0.25 for endogenous latent variables can, as a rough rule of thumb, be respectively described as substantial, moderate, or weak (Hair et al. 2011 & Hair et al. 2013).

Direct Relationship

Table 7: Path coefficients

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Remarks
H1: AT -> PR	0.589	0.591	0.051	11.650	0.000	Supported
H2: AW -> AT	0.362	0.360	0.069	5.238	0.000	Supported
H3: AW -> PR	0.163	0.164	0.053	3.057	0.002	Supported
H4: KN -> AT	0.417	0.417	0.076	5.483	0.000	Supported
H5: KN -> PR	0.156	0.156	0.064	2.459	0.014	Supported

As mentioned in table 7 Hypothesis 1 proposed the direct relationship between food safety attitude towards food safety practices. Based on the finding, the path coefficient from food safety attitude towards food safety practices are significant with the score of ($\beta = 0.591$; t-value 11.650; p-value = 0.000). Therefore, H1 is supported.

Hypothesis 2 proposed the direct relationship between food safety awareness towards food safety attitude. Based on the finding, the path coefficient from food safety awareness towards food safety attitude are significant with the score of ($\beta = 0.362$; t-value 5.328; p-value = 0.000). Therefore, H2 is supported.

Hypothesis 3 proposed the direct relationship between food safety awareness towards food safety practices. Based on the finding, the path coefficient from food safety awareness towards food safety practices are significant with the score of ($\beta = 0.163$; t-value 3.057; p-value = 0.002). Therefore, H3 is supported.

Hypothesis 4 proposed the direct relationship between food safety knowledge towards food safety attitude. Based on the finding, the path coefficient from food safety knowledge towards food safety attitude are significant with the score of ($\beta = 0.417$; t-value 5.483; p-value = 0.000). Therefore, H4 is supported.

Hypothesis 5 proposed the direct relationship between food safety knowledge towards food safety practices. Based on the finding, the path coefficient from food safety knowledge towards food safety practices are significant with the score of ($\beta = 0.156$; t-value 2.459; p-value = 0.014). Therefore, H5 is supported.

Mediating relationship

Table 8: Path coefficients of the mediating

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Remarks
H6: AW -> AT -> PR	0.213	0.213	0.047	4.535	0.000	Supported
H7: KN -> AT -> PR	0.246	0.246	0.049	5.002	0.000	Supported

Referring to table 8, hypothesis 6 proposed the mediating relationship between food safety attitude between food safety awareness towards food safety practices. Based on the finding, the path coefficient from food safety attitude between food safety awareness towards food safety practices are significant with the score of ($\beta = 0.213$; t-value 4.535; p-value = 0.000). Therefore, H6 is supported.

Hypothesis 7 proposed the mediating relationship between food safety knowledge between food safety attitude towards food safety practices. Based on the finding, the path coefficient from food safety knowledge between food safety attitude towards food safety practices are significant with the score ($\beta = 0.246$; t-value 5.002; p-value = 0.000). Therefore, H7 is supported.

Conclusion

This research uses the KAP model, which includes food safety awareness, knowledge, attitude, and practises. Food safety awareness, knowledge, and attitude all impact food safety practises, according to the study. Food safety awareness and knowledge affect food safety attitudes, which function as a mediator. Having a food safety mentality is equally as vital as knowledge and understanding. The study has two benefits. Theoretically, supermarket food safety practises show a consumer's process and outcome orientation. Promoting food safety practises among consumer models by integrating awareness as a KAP purpose makes sense. This principle also applies to food workers. This study's implications verified the KAP model. This means food safety professionals in higher education institutions should provide quality knowledge and food safety opportunities to consumers. Greater involvement in food safety procedures, especially associated management, could lead to higher consumer food safety practises, which leads to food hazard awareness. Strong belonging and active engagement in an organization's development are long-term benefits to the community and business. This survey also provides insight into customer attitudes on food safety practises in the Klang Valley. This study has limitations. The KAP model was built on previous studies and to validate the model with Malaysian consumers, more study is needed. The KAP model may not be generalizable because the data comes from Klang valley supermarket customers. Results suggested the food safety hazard/HACCP theory is a need for consumers, especially shoppers, about food safety concepts.

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