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Developing a Catering Quality Scale for University Canteens in China: From the Perspective of Food Safety

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Abstract: This study aimed to create a catering quality scale for university canteens in China. It is based on a questionnaire survey, with a total of 1302 distributed and 844 valid retrieved questionnaires, yielding a 64.8% recovery rate. Catering safety management, employee hygiene management, catering service, food quality, environmental atmosphere, and corporate social responsibility are the six topics primarily covered. In the first step of the scale, the dimensions were developed through EFA. Catering safety management includes kitchen safety, storage safety, and food safety. Employee hygiene management has two dimensions: Employee hygiene knowledge and employee management. Catering service includes service consciousness and a focus on consumers. Environmental atmosphere includes place management and place design. Further, corporate social responsibility encompasses social responsibility and taking care of employees. The second step of the scale involved conducting a CFA, which found a good overall fit of the scale. The results indicated good discriminant validity, convergent validity, and reliability. Moreover, the model comparison showed that the two-level, six-factor model was significantly better than other models.

Keywords: catering quality; food safety; scale; university canteens

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Citation: Ji, Y.-G.; Ko, W.-H. Developing a Catering Quality Scale for University Canteens in China: From the Perspective of Food Safety. *Sustainability* **2022**, *14*, 1281. https://doi.org/10.3390/su14031281

Academic Editor: Duarte Vinícius Silva

Received: 6 December 2021
Accepted: 4 January 2022
Published: 24 January 2022

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1. Introduction

Food quality is the most important component in determining a restaurant's worth [1]. The only way to succeed in the restaurant business is to serve high-quality meals. Food safety, food attractiveness, and food acceptability, according to Sulek and Hensley [2], are the three key aspects that influence the quality of food, including flavor, appearance, texture, color, temperature, and portion size.

Furthermore, one of the most critical aspects of food quality is food safety. According to a report published by the World Health Organization [3], there are approximately 2 million instances of incurable food poisoning per year in non-industrialized nations, as well as an estimated 600 million cases of foodborne disease (FBD) and inadequate food safety. 420,000 individuals died as a result of poor hygiene habits. In the United States, there are around 76 million instances of FBD, resulting in 5000 fatalities; in the United Kingdom, there are approximately 1.3 million cases of FBD, resulting in 500 deaths. In Africa, there are roughly 91 million cases of FBD, with 137,000 fatalities [4].

Restaurants are the primary source of foodborne illnesses [5]. The most commonly stated source of foodborne illness outbreaks is school canteens [6]. Food poisoning incidences are common in schools due to cross-contamination during food production [7,8]. FBD outbreaks are triggered by contamination induced by inappropriate food handling by food handlers in about 10% to 20% of cases [9]. In 2019, China had 2956 colleges and universities, with a total enrolment of 40.02 million in various categories of higher education [10]. Every day, tens of

thousands of meals are served at university cafeterias, where a lack of basic maintenance and food handling practices might have disastrous consequences [11].

As a result, food safety and catering quality should be prioritized in university canteens of China. Thus, this study looked into the most essential aspects of dining quality in college canteens from the standpoint of food safety and established indicators for consideration in the dining quality in college canteens of China. By examining the literature, this study developed preliminary catering quality indicators and conducted three assessments using the modified Delphi approach. The food safety and catering quality of college canteens were discussed from the views of industry veterans, education specialists, and government authorities. After interviewing experts, conducting exploratory and confirmatory factor analysis, and confirming the scale's reliability and validity, six dimensions and 37 indicators were created to develop an assessment of the importance of catering quality indicators in college and university of China. The catering quality index of university canteens is used as a benchmark for university canteen's development.

2. Literature Review

2.1. Food Quality

Peri [12] divides food quality into food product orientation and market sales orientation, with five dimensions: product component, psychological level, responsibility attribution, product/packaging system demand, and product/market system demand. Hence, it is commonly acknowledged that the quality of catering may be discussed from both food display and consumer standpoint.

History and culture, product creation, catering services, design, assessment, physiology, nutrition, psychology, marketing, and health are all aspects of food. Food quality encompasses several variables, including environmental space, staff interactions, the product itself, and the overall management system, among others. Thus, catering quality encompasses many factors that must be discussed in a variety of ways in order to fulfill the expectations of consumers [13]. Kim et al. [14] regard food quality, service quality, atmosphere, convenience, price, and value as six independent attributes of catering quality. Meanwhile, food quality is considered a significant aspect of restaurant quality [15] and a key predictor of customer loyalty [16]. Food quality has a favorable influence on the eating experience of consumers and is crucial to business success [17]. According to Seo & Shanklin [18], many environmental factors can influence customers' perceptions of food quality, including the types of food that must be selected, restaurant decoration and background music presentation, and dining etiquette in line with the restaurant environment, among others.

Furthermore, according to studies, the quality of catering is not only determined by the food but also by the customers. In particular, catering quality is determined by the sort of food served and the consumer's particular culinary preferences. Changes in quality criteria have occurred throughout time [19]; customers are becoming more conscious of the influence of high-quality food on their health, society, and the environment [20]. Therefore, the catering quality is divided into six categories in this study: catering safety management, employee hygiene management, catering service, food quality, environmental atmosphere, and corporate social responsibility.

2.2. Food Safety

Food safety refers to the assurance that food will not damage customers when prepared or consumed following its intended usage [21,22]. According to Dong & Ching [23], it entails paying attention to food-related concerns. Potential threats must be identified to limit the prevalence of human illnesses. Further, food safety is necessary to protect consumers' health at all phases of food material production, preparation, transit, and sale and to consider the environment at the time of consumption and the food materials in question [24]. In the latest revision of China's Food Safety Law of the People's Republic of China in 2018, food safety is defined as "non-toxic and harmless, meets the proper nutritional requirements, and does not cause any acuteness to human health subacute or chronic hazards" [25].

Foodborne disease (FBD) is linked to the epidemic and poses a threat to global public health, drawing international attention [26]. Thus, the coronavirus disease (COVID-19) epidemic has made consumers pay more attention to food safety issues. In February 2020, China put forward 10 recommendations on the hygienic habits should be changed and control where the coronavirus disease is endemic. They were announced to the public by China Science and Technology Daily and published further by other Chinese media institutions. Furthermore, they were used in many restaurants, canteens, cafes, and others [27].

According to statistics, food safety is a concern for billions of people around the world. Millions of people become ill, and hundreds of thousands die every year [28,29]. Foodborne diseases are China's "number one" food safety concern, accounting for 46 percent of cases and 6 percent of fatalities [30]. Six people died, and hundreds were sick due to the melamine poisoning of newborn milk powder in 2008. In 2009, the unlawful use of Clenbuterol in animal feed resulted in a number of foodborne illnesses. A big event involving cadmium in rice occurred in 2013 [31].

The Chinese government has recognized the gravity of the present food safety issues and has enacted a number of rules and regulations and a comprehensive food control management, monitoring, and inspection system [32]. The China's Food Safety Law was launched the need for continuing to strengthen the food safety monitoring and supervisory system and risk prevention concepts [25]. Subsequently, food safety was stressed again during the Communist Party of China's 19th National Congress in 2017 and two national public health initiatives—the 2016 Healthy China 2030 Plan and the 2019 Healthy China Action Plan (2019–2030) [33]. Further, in 2019, the Chinese government released "Opinions on Deepening Reform and Strengthening Food Safety Work" to develop new food safety recommendations [34]. These principles serve as a road map for improving food safety risk assessment while adhering to international standards.

2.3. School Canteen

The school canteen is an integral aspect of the eating environment at the school. It is vital in increasing the quality of school eating to provide a healthy atmosphere for youngsters [35]. Because dangers from many sources may cause contamination throughout the food preparation and distribution phases and eventually contribute to the development of FDS [36], quality management of school catering is essential. Inadequate food preparation and food facilities in food preparation sites that do not fulfill sanitary requirements may cause outbreaks of foodborne illnesses. Thus, food safety issues will arise as a result of a lack of production control, raw material control, pest control, good manufacturing practices (GMP), good hygiene practices (GHP), and other prerequisite programs, as well as a lack of standard food safety programs, such as hazard analysis and critical control points (HACCP) [37].

Foodborne disease outbreaks in food preparation and service can be caused by inappropriate cooking and storage temperatures, unsanitary handling procedures, poor personal hygiene, and acquiring food from unknown sources [38]. Food handlers' actions have a significant influence on contamination, which may lower the end product's quality. Food workers have varying levels of food safety awareness. Appropriate levels of knowledge cannot be converted into excellent hygienic practices while processing and handling food. Thus, training programs aid food handlers in understanding food safety [39].

Many high-income nations have implemented nutrition rules in school cafeterias, promoting better food and beverage alternatives while restricting unhealthy ones in accordance with national dietary requirements. However, compliance with these regulations is low. According to the findings of the School Health Policy and Practice Study (SHPP) in 2012, approximately 60% of secondary schools in the United States did not meet the necessary nutritional criteria [40]. The World Health Organization (WHO) declared that schools should be used as essential sites to enhance public health nutrition and lower the risk of unhealthy weight increase in children [41]. Meanwhile, some foreign jurisdictions have

implemented laws that encourage the supply of food in schools that adheres to national dietary requirements [42].

3. Methodology

The major purpose of this study is to extract catering quality indicators from Chinese University canteens from the literature, determine the indicators using the Delphi method, and assess item validity.

3.1. Data Collection, Item Generation, and Content Validity Assessment

The process of creating project samples, collecting data, purifying measurement, collecting data again, assessing its performance, and constructing a formal project is known as scale development [43]. This study employs literature analysis to create preliminary indicators of the catering quality of Chinese university canteens, resulting in an initial database of 88 indicators based on relevant domestic and foreign literature. Expert review was performed to assess the content's efficacy using the enhanced Delphi method. Three sets of questions were assessed by 35 specialists, who looked for repetition and content ambiguity. A total of 35 experts and scholars were invited, including seven government officials for catering supervision, 17 course teachers for teaching culinary, and 11 restaurant chefs. They have all worked for more than 5 years. This method resulted in the elimination of 18 questions, leaving 70 for future investigation. Finally, 23 questions on catering safety management, 10 questions on employee hygiene management, 8 questions on catering service, 8 questions on food quality, 11 questions on environmental atmosphere, and 10 questions on corporate social responsibility were obtained. The original question bank is included in the questionnaire for future study. Further, a five-point Likert scale was used, ranging from "very inadequate" (1 point) to "extremely adept" (5 points).

Canteen employees, primarily from Chinese universities, are the respondents for this study's questionnaire. The questionnaire was collected via convenience sampling from more than 40 schools and institutions in Northeast, Central, and Southern China, which would be open for completion from November 2020 through January 2021. The sampling distribution of the schools depends on the number of faculty and students, wherein 1/3 has more than 30,000, 1/3 has 10,000–30,000, and 1/3 has fewer than 10,000. These schools all provide a cafeteria and set menu. Pre-test research was undertaken as a research survey with infield practitioners who worked in Chinese university canteens for more than half a year. In total, 298 questionnaires were effectively returned. An item analysis was conducted for each item, including the mean, skewness, extreme group comparison, item-total correlation, and factor loading. The tools for 48 items were gathered and refined without any deletions, and exploratory factor analysis (EFA) used variance extreme rotation to minimize the number of items. Simultaneously, exploratory factor analysis (EFA) reduced the number of components using the maximum rotation of variance. A total of 1302 official questionnaires were provided when the questionnaire prediction was completed, and 844 were successfully retrieved. The overall recovery rate for the formal questionnaire was 64.8 percent.

3.2. Development of the Measurements

EFA with varimax rotation and principal axis analysis was used to determine underlying variables in the data matrix. The factor analysis was performed, and the coefficient was recomputed each time an item was eliminated from the study until satisfactory results were obtained. After a series of deletions, the final number of items included 17 items for assessing catering safety management, namely, 7 items for kitchen safety, 5 items for storage safety, and 5 items for food safety; 8 items for assessing employee hygiene management, namely, 4 items for employee hygiene knowledge and 4 items for employee management; 6 items for assessing catering service, namely, 3 items for service consciousness and 3 items for focus on consumers; 8 items for assessing food quality; 10 items for assessing environmental atmosphere, namely, 5 items for place management and 5 items for place design; and 10 items for assessing corporate social responsibility, namely, 7 items for social re-

sponsibility and 3 items for taking care of employees. The component structure of the competencies was investigated using confirmatory factor analysis (CFA) with maximum likelihood estimation.

3.3. Data Analysis

The Statistical Package for Social Sciences (SPSS) version 25.0 and AMOS 23 were used to analyze the data. Absolute fitness, value-added fitness, and simple fitness were employed to assess and validate the model fitness in this work [44–46]. The overall fit index of the model was determined as follows: chi-squared statistic ($\chi 2$), chi-squared statistic adjusted by degrees of freedom ($\chi 2/df$), and root mean square error of approximation (RMSEA). For this study, an RMSEA value of 0.08 or less indicates a satisfactory fit. The goodness-of-fit index (GFI), the normed-fit index (NFI), and the comparative fit index (CFI) were also assessed. A good match is indicated by fit indices greater than 0.90 [47].

4. Results and Discussion

4.1. Finalizing the Measurements

This research looked at a total of 844 valid surveys. The proportion of female subjects was 52.96 percent, higher than that of male subjects (47.04%). Subjects aged 41–50 years old (49.64%) accounted for the majority of the sample. Junior high and below subjects accounted for the highest proportion, accounting for 56.87%. Further, most subjects held non-management positions (76.18%). In addition, subjects with work experience between 1 and 4 years comprised the highest proportion of the sample, accounting for 56.8 percent, while those with work experience between 1 and 4 years comprised the highest proportion, accounting for 56 percent. The participants in the middle made up 19.79 percent of the total sample. In the job category, waiters accounted for 27.73 percent of the sample, followed by chefs (23.34%).

This study divides the catering quality indicators of Chinese university canteens into catering safety management, employee hygiene management, catering service, food quality, environmental atmosphere, and corporate social responsibility indicators. Through exploratory factor analysis, the catering safety management indicators are divided into kitchen safety, storage safety, and food safety; employee hygiene management indicators into employee hygiene knowledge and employee management; catering service indicators into service consciousness and focus on consumers; environmental atmosphere indicators into place management and place design; and corporate social responsibility indicators into social responsibility and caring for employees. Notably, the food quality index is not divided. Subsequently, a confirmatory factor analysis (CFA) was performed.

The standardization coefficients of all items are between 0.694 and 0.910, achieving convergent validity. On the other hand, the average extraction amount of variance is between 0.610 and 0.768, greater than 0.5. The reliability and validity test results of each variable in this study all meet the test standards: They have convergent validity, Cronbach's α value is between 0.815 and 0.928, the internal consistency of each aspect is quite high, and the combination reliability is between 0.824 and 0.930, which is greater than the ideal value of 0.7, which has fairly high reliability (Table 1).

This study constructed a Chinese university catering quality scale from a food safety perspective. The chi-square value ($\chi 2$) in the absolute fit test is 1374.613, the degree of freedom (df) is 563, and the ratio of chi-square degrees of freedom ($\chi 2/df$) fit is 2.442. Further, the GFI and AGFI values are 0.918 and 0.898, respectively. Both values are greater than 0.8, meeting the verification standard. Meanwhile, the SRMR value is 0.026, reaching the acceptable range. The RMSEA value is 0.041—below 0.08—which meets the standard value. In terms of value-added adaptation, the CFI value is 0.969, the NFI value is 0.949, and the TLI (NNFI) value is 0.964, which are higher than the ideal value of 0.9, indicating that the mode adaptation is good. In the two tests of simple fit, the PNFI value is 0.802 and the PGFI value is 0.735, both of which meet the verification standards. All three types

of model adaptation tests in this study passed and met the test standards. Thus, it can be inferred that the overall model of this research scale has good adaptability (Table 2).

Discriminative validity determines whether the AVE of each construct is greater than the square value of the correlation coefficient between each pair of constructs [48]. The correlation coefficient of each construct in this study is between 0.493–0.818, which is less than the square root value of the AVE of the individual constructs in the diagonal line. The detailed values are shown in Table 3. Therefore, it shows that the constructs have different validity.

4.2. Model Comparison

This study analyzed and compared the final and alternative models obtained by CFA (Table 4). The fit of five models is compared: Two types of first-order models, two types of second-order models, and a third-order model. The first model discussed in this study is the first-order, one-factor model, in which all indicators are loaded on the quality of the catering. The second model is a first-order, six-factor model, including catering safety management, employee hygiene management, catering services, food quality, environmental atmosphere, and corporate social responsibility. The third model is a second-order, one-factor model, which combines 12 factors: Kitchen safety, storage safety, food safety, employee hygiene knowledge, employee management, service consciousness, focus to consumers, food quality, place management, place design, social responsibility, and employee care. The underlying factors aggregate into the quality of the catering. The fourth model, the second-order, six-factor model, integrates the second-level kitchen safety, storage safety, and food safety into potential catering safety management; employee hygiene knowledge and employee management into potential employee hygiene management; service consciousness and focus on consumers into potential catering services; place management and place design into the potential environmental atmosphere; and social responsibility and employee care into potential corporate social responsibility. The fifth model, the third-order, one-factor model, is based on the second-order six factors, adding the third-level catering safety management, employee hygiene management, catering service, food quality, environmental atmosphere, and corporate social responsibility to catering quality. Model comparison results show that the fits of the second-order, six-factor model and the three-level model are better than other models. Noteworthily, the second-order, six-factor model is the best (Figure 1).

4.3. Discussion

After the EFA of the Chinese University Canteen Food Quality Scale constructed in this study, the scale is divided into 12 dimensions: Kitchen safety, storage safety, food safety, employee hygiene knowledge, employee management, service consciousness, focus on consumers, food quality, place management, place design, social responsibility, and caring for employees. Then, confirmatory factor analysis (CFA) was performed to develop a formal Chinese university canteen food quality scale. The scale of this study was tested by a violation estimation test, model fitness check, convergence validity verification, and discrimination validity verification. These values are all higher than the standard test value, indicating that the scale has good validity. Among the reliability values, Cronbach's α value and composite reliability are both greater than 0.8, indicating that the scale has good reliability.

Table 1. Confirmation factor analysis results for final measurement scale.

Construct		Item	Standardized Factor Loadings	Cronbach's α	Composite Reliability	Average Variance Extracted	Mean
Catering safety management (CSM)	Kitchen safety (KS)	KS1. Proper use and control of detergents and disinfectants	0.827	0.860	0.861	0.675	4.31
		KS2. Waste (e.g., food waste and expired products) treatment and removal methods	0.790				4.27
		KS3. Cleanliness of catering and serving areas	0.846				4.35
	Storage safety (SS)	SS1. Compliance with the relevant regulations of storage hygiene management (classification, storage in separate shelves, registration of materials, etc.)	0.763	0.824	0.824	0.610	4.31
		SS2. Time and temperature control during food storage	0.774				4.25
		SS3. Food material management follows the first-in-first-out warehousing principle	0.806				4.35
	Food safety (FS)	FS1. Hygiene and safety management during the food (or catering) preparation process	0.809	0.844	.844	0.643	4.37
		FS2. Clean and hygienic environment in the kitchen	0.798				4.35
		FS3. Proper handling of overnight meals according to standards	0.799				4.32
Employee hygiene management (EHM)	Employee hygiene knowledge (EK)	EK1 Employees' awareness of food (or catering) safety and hygiene	0.862	0.893	0.893	0.736	4.3
		EK2. Employees' awareness of food (or catering) contamination prevention methods	0.863				4.18
		EK3. Employees' awareness of food (or catering) risks and hazards	0.848				4.26
	Employee management (EM)	EM1. Employees are familiar with food (or catering) safety and sanitation operating specifications	0.850	0.884	0.885	0.719	4.25
		EM2. Employee admission rules (washing hands and disinfection, clothing and appearance, wearing masks and gloves, talking as little as possible...)	0.840				4.37
		EM3. Mandatory employees' independent hygiene management	0.854				4.32

Table 1. *Cont.*

Construct		Item	Standardized Factor Loadings	Cronbach's α	Composite Reliability	Average Variance Extracted	Mean
Catering service (CS)	Service consciousness (SC)	SC1. Pay attention to appearance and clothing (e.g., work clothes and hats are neatly worn, clean, and hygienic, and the ID badge is displayed as per the standard)	0.844	0.877	0.878	0.705	4.34
		SC2. Service attitude (e.g., civilized language, kind attitude, polite to others)	0.852				4.36
		SC3. Respect the privacy of consumers (including students)	0.823				4.32
	Focus on consumers (FC)	FC1. Attach importance to communicating with consumers (including students) and listening to opinions	0.836	0.863	0.864	0.679	4.30
		FC2. Understand catering expertise	0.809				4.15
		FC3. Responding to and handling complaints from consumers (including students)	0.827				4.23
Food quality (FQ)	food quality (FQ)	FQ1. Food (or meal) appearance and color	0.849	0.928	0.930	0.768	4.22
		FQ2. Taste of food (or meal) (e.g., chewiness, crispness)	0.910				4.14
		FQ3. Food (or meal) is delicious	0.885				4.15
		FQ4. Nutritional combination of food	0.860				4.10
Environmental atmosphere (EA)	Place management (PM)	PM1. Washroom cleaning and disinfection	0.800	0.854	0.856	0.664	4.36
		PM2. Regular inspection of firefighting equipment	0.826				4.41
		PM3. The dining place is equipped with ample sinks and taps	0.818				4.37
	Place design (PD)	PD1. Daylighting and lighting of dining places	0.815	0.862	0.864	0.679	4.40
		PD2. Space planning and design of dining places	0.839				4.28
		PD3. Seating comfort in dining places	0.818				4.24
Corporate social responsibility (CSR)	The social responsibility (SR)	SR1. Recognition of national food (or catering) safety policies	0.787	0.844	0.846	0.646	4.30
		SR2. Use environmentally friendly products	0.830				4.30
		SR3. It is obligated to accept government supervision	0.794				4.34
	Take care of employees (TE)	TE1. Improve employee performance and rewards	0.694	0.815	0.824	0.611	4.06
		TE2. Let employees identify with corporate culture	0.818				4.16
		TE3. Respect the cultural differences, beliefs, and values of employees and consumers (including students)	0.826				4.27

n = 844.

Table 2. Goodness of fit indices for catering quality of university canteens.

CFA Results	χ^2	df	CFI	RMSEA	SRMR	NFI	NNFI	GFI	AGFI	PNFI	PGFI
	1374.613	563	0.969	0.041	0.026	0.949	0.964	0.918	0.898	0.802	0.735

n = 844. CFI = Bentler's comparative fit index; RMSEA = root mean square error of approximation; SRMS = standard root mean square residual; NFI = Normed fit index; NNFI = non-normed fit index; GFI = Goodness-of-Fit Index; AGFI = Adjusted Goodness-of-Fit Index.

Table 3. Correlation coefficient of each potential variable.

Constructs	Kitchen Safety	Storage Safety	Food Safety	Employee Hygiene Knowledge	Employee Management	Service Consciousness	Focus on Consumers	Food Quality	Place Management	Place Design	The Social Responsibility	Take Care of Employees
Kitchen safety	**0.821**											
Storage safety	0.698 **	**0.781**										
Food safety	0.783 **	0.770 **	**0.802**									
Employee hygiene knowledge	0.790 **	0.727 **	0.741 **	**0.858**								
Employee management	0.814 **	0.704 **	0.782 **	0.818 **	**0.848**							
Service consciousness	0.742 **	0.649 **	0.696 **	0.710 **	0.778 **	**0.840**						
Focus on consumers	0.732 **	0.675 **	0.707 **	0.805 **	0.795 **	0.783 **	**0.824**					
food quality	0.672 **	0.661 **	0.647 **	0.760 **	0.729 **	0.714 **	0.806 **	**0.876**				
Place management	0.586 **	0.506 **	0.546 **	0.557 **	0.603 **	0.655 **	0.617 **	0.593 **	**0.815**			
Place design	0.602 **	0.501 **	0.549 **	0.567 **	0.616 **	0.65 3 **	0.633 **	0.636 **	0.744 **	**0.824**		
The social responsibility	0.606 **	0.545 **	0.569 **	0.634 **	0.646 **	0.662 **	0.658 **	0.630 **	0.760 **	0.718 **	**0.804**	
Take care of employees	0.511 **	0.493 **	0.491 **	0.558 **	0.550 **	0.558 **	0.607 **	0.611 **	0.703 **	0.673 **	0.756 **	**0.782**

(1) ** $p < 0.01$ (two-tailed); N = 844. (2) The square root of AVE for discriminant validity are in parentheses along the diagonal.

Table 4. Goodness of fit indices for catering quality of university canteens.

Model	χ^2	df	CFI	IFI	RMSEA	SRMR	NFI	GFI	$\triangle\chi^2$	$\triangle$df	Sig
(1) One level model-one factor	5866.401	629	0.801	0.802	0.099	0.0668	0.783	0.595			
(2) One level model-six factor	2220.628	614	0.939	0.939	0.056	0.0328	0.918	0.860	(1)–(2) 3645.773	15	0.000
(3) Two level model- one factor	2771.970	617	0.918	0.918	0.064	0.0579	0.897	0.823	(3)–(2) 551.342	3	0.000
(4) Two level model-six factor	1649.427	603	0.960	0.960	0.045	0.0307	0.939	0.900	(3)–(4) 1122.543	14	0.000
(5) Three level model-one factor	2147.899	612	0.942	0.942	0.055	0.0502	0.921	0.876	(5)–(4) 498.472	9	0.000

n = 844. CFI = Bentler's comparative fit index; IFI = incremental fit index; RMSEA = root mean square error of approximation; SRMS = standard root mean square residual; NFI = Normed fit index; GFI = goodness-of-fit index.

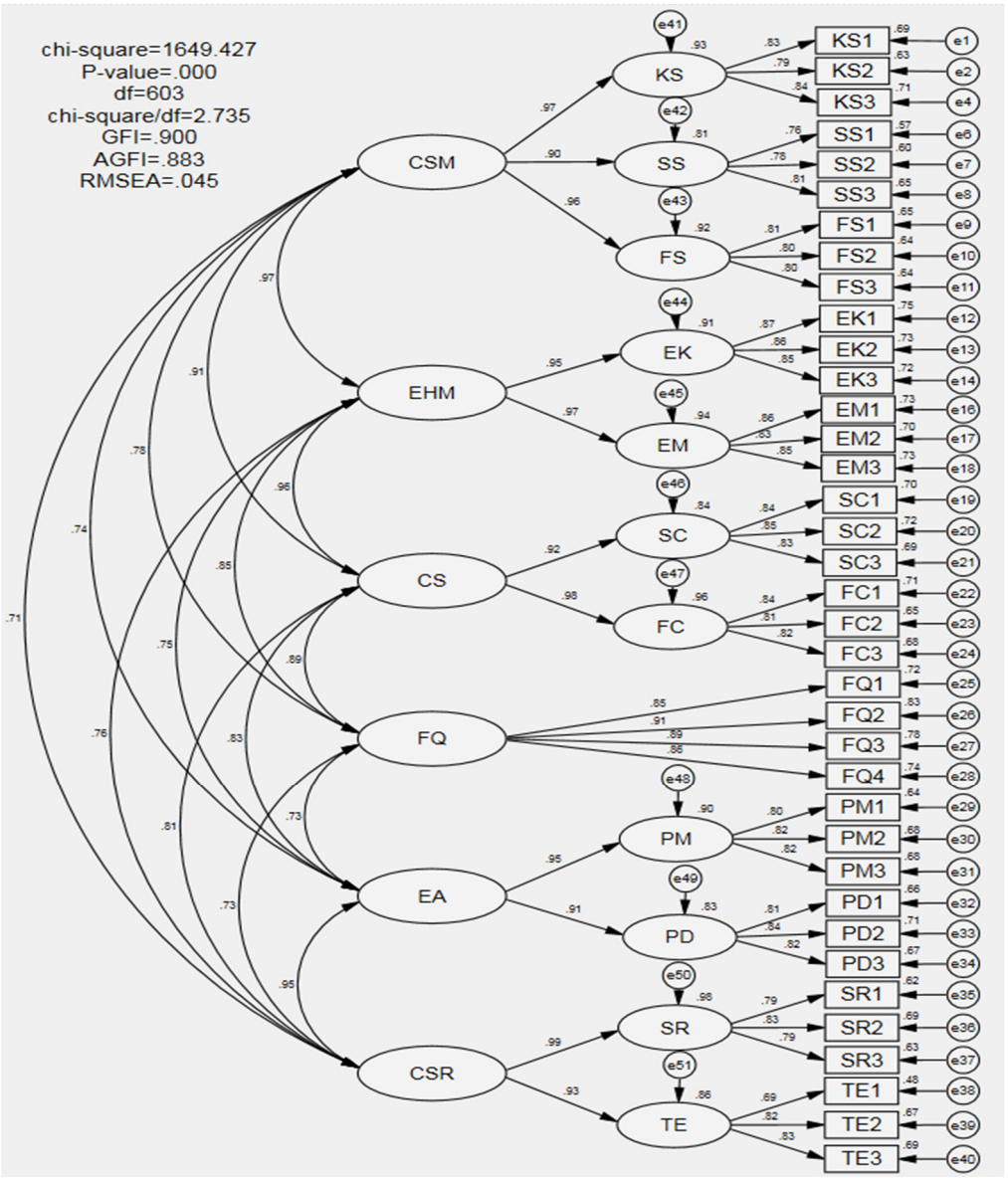


Figure 1. The two-level model with six factors (abbreviation as Table 1).

In this study, the catering safety management aspect ultimately retained three items for kitchen safety, three items for storage safety, and three items for food safety, with an average score between 4.25 and 4.37. The most equipped items are "FS1. Hygiene and safety management during the food (or catering) preparation process" and "SS3. Food material

management follows the first-in-first-out warehousing principle". The items with the lowest average scores are in the following order: (1) "FS2. Clean and hygienic environment in the kitchen", (2) "KS3. Cleanliness of catering and serving areas", (3) "FS3. Proper handling of overnight meals according to standards", (4) "SS1. Compliance with the relevant regulations of storage hygiene management (classification, storage in separate shelves, registration of materials, etc.)", (5) "KS1. Proper use and control of detergents and disinfectants"; (6) "KS2. Waste (e.g., food waste and expired products) treatment and removal methods", and (7) "SS2.Time and temperature control during food storage". This finding indicates that food handlers should have sufficient food-handling skills, always maintain high food and environmental hygiene standards, and handle food hygienically during food preparation and supply to ensure that food is safe when it reaches consumers [49]. At the same time, food safety is a complex system involving multiple links, such as raw materials, food production, processing, transportation, and storage technology. Meanwhile, risk factors, such as unsafe food sources and improper food storage, are important causes of FBD [50].

The acquisition of food safety knowledge by employees and the management of food-processing personnel are important links in ensuring food safety. In this study, the employee hygiene management aspect finally retained three items of employee hygiene knowledge and three items of employee management, of which the average score was between 4.18 and 4.37. The most equipped items are "EM2. Employee admission rules (washing hands and disinfection, clothing and appearance, wearing masks and gloves, talking as little as possible...)" and "EM3. Mandatory employees' independent hygiene management". These items are followed by "EK1. Employees' awareness of food (or catering) safety and hygiene", "EK3. Employees' awareness of food (or catering) risks and hazards", and "EM1. Employees are familiar with food (or catering) safety and sanitation operating specifications", with "EK2. Employees' awareness of food (or catering) contamination prevention methods" having the lowest average score. The food safety knowledge of food processing personnel is mainly related to the correct handling, storage, and preparation of food. Acquiring food safety knowledge is essential as it has the potential to minimize the outbreak of foodborne diseases [51]. Insufficient food safety knowledge of food handlers may lead to unsafe food handling practices and cross-contamination [52]. The management of food processing personnel is also significant because food processing behaviors have an important impact on pollution and may reduce the quality of the final product. Safety training helps food personnel understand food safety [36].

In the aspect of catering service, three items on service consciousness and three items on the emphasis on consumers are finally retained, of which the average score is between 4.15 and 4.36. The most equipped items are "SC2. Service attitude (e.g., civilized language, kind attitude, polite to others)" and "SC1. Pay attention to appearance and clothing (e.g., work clothes and hats are neatly worn, clean, and hygienic, and the ID badge is displayed as per the standard)". These items are followed by "SC3. Respect the privacy of consumers (including students)" and "FC1. Attach importance to communicating with consumers (including students) and listening to opinions". Noteworthily, "FC3. Responding to and handling of complaints from consumers (including students)" and "FC2. "Understand catering expertise" have the lowest average scores. Furthermore, in the catering industry, service quality is the most studied restaurant-quality attribute [53]. It is measured by intangible benefits, such as responsiveness, courtesy, care, and professional behavior provided by service personnel [54]. Andaleeb and Conway [55] studied the factors that explain customer satisfaction in the full-service restaurant market segment. The results show that service responsiveness is the most important factor in customer satisfaction, among food quality, reliability, physical design, and price.

There are four items in the food quality dimension in this study, and the average score is between 4.10 and 4.22. The most equipped items are "FQ1. Food (or meal) appearance and color", "FQ3. Food (or meal) is delicious", and "FQ2. Taste of food (or meal) (e.g., chewiness, crispness)". Meanwhile, "FQ4. Nutritional combination of food" has the lowest average score. Consumers' satisfaction with food and their consumption intentions are

affected by many factors, mainly including satiety, nutritional value, visual appeal, smell, color, freshness, price, promotion, and variety innovation, etc. [56]. Moreover, the results of this study show that the appearance and color, taste, and nutrition of food are the factors that should be considered first when choosing dishes.

The environmental atmosphere finally retained three items for place management and three items for place design, with an average score between 4.24 and 4.41. The most equipped items are "PM2. Regular inspection of firefighting equipment" and "PD1. Daylighting and lighting of dining places". These items are followed by "PM3. The dining place is equipped with ample sinks and taps" and "PM1. Washroom cleaning and disinfection". Meanwhile, "PD2. Space planning and design of dining places" and "PD3. Seating comfort in dining places" have the lowest average scores. The restaurant's environmental factors, such as music, light, smell, etc., can leave a distinct impression on consumers and affect their perception and emotional response [57]. In particular, a consistent environment tends to be in the minds of consumers [58].

The aspect of corporate social responsibility ultimately retained three items of social responsibility and three items of caring for employees, with an average score of 4.06–4.34. The most equipped items are "SR3. It is obligated to accept government supervision" and "SR1. Recognition of national food (or catering) safety policies". These items are followed by "SR2. Use environmentally friendly products" and "TE3. Respect the cultural differences, beliefs, and values of employees and consumers (including students)". Meanwhile, "TE2. Let employees identify with corporate culture" and "TE1. Improve employee performance and rewards" have the lowest average scores. Corporate social responsibility initiatives save water or energy, and charitable donations, fair employment, and the use of environmentally friendly products can all help promote overall operations and gain customer trust, thereby retaining and winning customers [59]. This research shows that university canteens should be supervised by the government, pay attention to food safety, use environmentally friendly products, respect the cultural differences, beliefs, and values of employees and consumers (including students), and provide training, education, and incentives measures for employees to allow them to identify with the corporate culture [60].

In summary, the 37 indicators in the 6 dimensions and 12 dimensions in this research scale are selected from 88 initial indicators. Noteworthily, the importance of the indicators is consistent with previous literature studies. The scale is useful for guiding Chinese universities, and the standard operation process of the canteen has a notable reference significance.

5. Conclusions and Recommendations

5.1. Conclusions

This study is mainly conducted through a questionnaire survey, a literature analysis, and the modified Delphi method to construct a Chinese university canteen food quality scale by performing exploratory and confirmatory factor analysis and finally determining food safety management, employee hygiene management, and catering services, food quality, environmental atmosphere, and corporate social responsibility through six dimensions and thirty-seven indicators. Furthermore, the research results show that the overall fit, discriminative validity, aggregate validity, and scale reliability are good. Moreover, the model comparison shows that the second-order, six-factor model is significantly better than other models.

5.2. Recommendation

Food safety has always been a major concern. School cafeterias are the most frequently mentioned foodborne disease outbreak site. The results of this study on the aspects of catering safety management show that university canteens should attach great importance to food safety issues. First, it is recommended that university canteens pay great attention to cleanliness, hygiene, and safety management in the process of catering. Second, university canteens should abide by the principle of first-in-first-out storage of food materials, classify food materials, store them on shelves, and perform good registration management. Finally,

university canteens should establish clear standard operating procedures for procurement, packaging, storage, selection, cleaning, cutting, cooking, garbage disposal, and others, strictly control each link, and attach great importance to catering and employee safety and hygiene.

The role of food handlers in the food chain is critical to food safety and quality assurance. Food handlers are well-known carriers of foodborne pathogens, and their non-compliance with hygiene standards during food processing is the main cause of food contamination. Thus, the food safety knowledge of food handlers is mainly related to the correct handling, storage, and preparation of food. Therefore, this study suggests that university canteens should strengthen the training of employees' food (or catering) safety and hygiene, risk hazards and pollution prevention methods, be familiar with food (or catering) safety and hygiene standards, and pay attention to employee admission regulations.

Employees are the bridge between the cafeteria and consumers, and they represent the cafeteria itself. In terms of service staff performance, the results of this study found that the performance of service staff directly affects the satisfaction of faculty and staff. Therefore, it is recommended that university canteen staff comprehensively strengthen staff service training, such as service attitude training, clothing and grooming training, response to consumer complaints and handling training, catering professional knowledge training, and others, and establish a good employee reward and punishment system and systematic management administrative procedures. In addition to training employees in professional services, the training and fairness of employees' psychological quality in the face of emergencies must also be paid attention.

The quality of dishes is the most important factor that determines customer satisfaction and behavioral intentions. The results of this study prove that consumers attach great importance to the appearance and color, taste, and nutrition of food. Therefore, it is recommended that university canteens start with the color, fragrance, nutritional value, color, and freshness of the dishes according to the actual needs of consumers, strengthen chef cooking skills training, continuously improve chefs' cooking skills, and introduce competition and reward and punishment mechanisms to stimulate the enthusiasm of chefs to improve the quality of the dishes.

There are several universities in China, with multiple large canteens. Meanwhile, the dining environment of the canteen is extremely important. Thus, it is recommended by this research through its investigation that the canteen be equipped with adequate hand basins and faucets, and the toilets cleaned and disinfected regularly to improve the dining hygiene in the canteen. At the same time, the canteen space should be rationally planned, and the lighting of the canteen should be strengthened to ensure comfort in the consumption of the meal. Finally, firefighting equipment must be checked regularly to ensure fire safety.

Based on the public welfare characteristics of university canteens, canteen operators must be strictly checked and screened to prevent all kinds of food hygiene and safety incidents and improve the overall quality of university canteens. This research suggests that university canteens should accept the government's macro-control, give full play to the government's market supervision and public service functions, and transform from single supervision to social common supervision to avoid the problem of reduced food quality due to reduced canteen profits. Secondly, university canteens should respect employees' cultural differences, beliefs, and values and increase employee performance and rewards to improve their enthusiasm for work and sense of identity with corporate culture.

5.3. Limitation

This research has some limitations due to time, manpower, and funding issues. First, the sample survey of this research comes from a single country. Further investigations must be conducted through research to extend the applicability of different countries, regions, ethnicities, and cultural backgrounds. Second, China has a vast territory, and this sample is only selected among its several universities. More than 40 colleges and universities have not been classified, and this conclusion cannot represent the quality of catering in all

college and university canteens. In addition, it has not been able to classify the attributes of the restaurant, and whether there may be differences in catering quality due to different races, cultures, or ethnicities. Therefore, it is suggested that future researchers conduct in-depth research based on the classification of different types or different sizes of university canteens in China.

Author Contributions: Conceptualization, W.-H.K. and Y.-G.J.; methodology, W.-H.K. and Y.-G.J.; data analysis, Y.-G.J.; investigation, Y.-G.J.; project administration, W.-H.K. and Y.-G.J.; resources, W.-H.K. and Y.-G.J.; supervision, W.-H.K.; validation, W.-H.K.; writing—original draft, W.-H.K. and Y.-G.J.; writing—review and editing, W.-H.K. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Shimmura, T.; Ichikari, R.; Okuma, T.; Ito, H.; Okada, K.; Nonaka, T. Service robot introduction to a restaurant enhances both labor productivity and service quality. *Procedia CIRP* **2020**, *88*, 589–594. [CrossRef]
2. Sulek, J.M.; Hensley, R.L. The Relative Importance of Food, Atmosphere, and Fairness of Wait. *Cornell Hotel Restaur. Adm. Q.* **2004**, *45*, 235–247. [CrossRef]
3. World Health Organization WHO. WHO Estimates of the Global Burden of Foodborne Diseases: Foodborne Disease Burden Epidemiology Reference Group 2007–2015. Available online: https://reliefweb.int/report/world/estimates-global-burden-foodborne-diseases?gclid=CjwKCAiA1uKMBhAGEiwAxzvX98KJ9Zux7qbILTdNXPJIc3y90_nYZLGVoFkOkAqfB6H-T_Z3buEBjBoCMakQAvD_BwE (accessed on 1 July 2021).
4. Mwambi, M.; Bijman, J.; Mshenga, P.; Oosting, S. Adoption of food safety measures: The role of bargaining and processing producer organizations. *NJAS Wagening. J. Life Sci.* **2020**, *92*, 100337. [CrossRef]
5. Kaskela, J.; Sund, R.; Lundén, J. Efficacy of disclosed food safety inspections in restaurants. *Food Control* **2021**, *123*, 107775. [CrossRef]
6. Rahman, M.M.; Arif, M.T.; Bakar, K.; Tambi, Z.B. Food safety knowledge, attitude and hygiene practices among the street food vendors in northern Kuching city, Sarawak. *Borneo Sci.* **2012**, *31*, 95–103.
7. Sanlier, N.; Kanaklioghi, E. Food safety knowledge, attitude and food handling practices of students. *Br. Food J.* **2012**, *114*, 469–480. [CrossRef]
8. Azanaw, J.; Gebrehiwot, M.; Dagne, H. Factors associated with food safety practices among food handlers: Facility-based cross-sectional study. *BMC Res. Notes* **2019**, *12*, 683. [CrossRef] [PubMed]
9. Girma, G. Prevalence, Antibiogram and Growth Potential of Salmonella and Shigella in Ethiopia: Implications for Public Health: A Review. *Res. J. Microbiol.* **2015**, *10*, 288–307. [CrossRef]
10. Ministry of Education of the People's Republic of China. The Development of National Education in 2019. Available online: http://www.moe.gov.cn/jyb_sjzl/s5990/202008/t20200831_483697.html (accessed on 12 July 2021).
11. Meleko, A.; Henok, A.; Tefera, W.; Lamaro, T. Assessment of the Sanitary Conditions of Catering Establishments and Food Safety Knowledge and Practices of Food Handlers in Addis Ababa University Students' Cafeteria. *Sci. J. Public Health* **2015**, *3*, 733. [CrossRef]
12. Peri, C.; Lavelli, V.; Marjani, A. *Qualita' Nelle Aziende e Nelle Filiere Agoalimentari*; Hoepli: Milano, Italy, 2004.
13. Meiselman, H.L. Dimensions of the meal. *J. Foodserv.* **2008**, *19*, 13–21. [CrossRef]
14. Kim, W.G.; Ng, C.Y.N.; Kim, Y.-S. Influence of institutional DINESERV on customer satisfaction, return intention, and word-of-mouth. *Int. J. Hosp. Manag.* **2009**, *28*, 10–17. [CrossRef]
15. Ryu, K.; Han, H. Influence of the quality of food, service, and physical environment on consumers atisfaction and behavioral intentions in quick-casual restaurants: Moderating role of perceived price. *J. Hosp. Tour. Res.* **2010**, *34*, 310–329. [CrossRef]
16. Bujisic, M.; Hutchinson, J.; Parsa, H. The effects of restaurant quality attributes on customer behavioral intentions. *Int. J. Contemp. Hosp. Manag.* **2014**, *26*, 1270–1291. [CrossRef]
17. Namkung, Y.; Jang, S. Does Food Quality Really Matter in Restaurants? Its Impact on Customer Satisfaction and Behavioral Intentions. *J. Hosp. Tour. Res.* **2007**, *31*, 387–409. [CrossRef]
18. Seo, S.; Shanklin, C.W. Using Focus Groups to Determine Specific Attributes That Influence the Evaluation of Quality Food and Service Quality in Continuing Care Retirement Communities. *J. Foodserv. Bus. Res.* **2006**, *8*, 35–51. [CrossRef]
19. Grunert, K.G. Food quality and safety: Consumer perception and demand. *Eur. Rev. Agric. Econ.* **2005**, *32*, 369–391. [CrossRef]
20. Riccioli, F.; Moruzzo, R.; Zhang, Z.; Zhao, J.; Tang, Y.; Tinacci, L.; Boncinelli, F.; De Martino, D.; Guidi, A. Willingness to pay in main cities of Zheijiang provice (China) for quality and safety in food market. *Food Control* **2020**, *108*, 106831. [CrossRef]
21. Othman, N.M. Food safety in Southeast Asia: Challenges facing the region. *Asian J. Agric. Dev.* **2007**, *4*, 83–92.

22. My, N.H.; Demont, M.; Verbeke, W. Inclusiveness of consumer access to food safety: Evidence from certified rice in Vietnam. *Glob. Food Secur.* **2021**, *28*, 100491. [CrossRef]
23. Dong, T.T.M.; Ching, G.S. A case study on the food safety issues of college students in Taiwan. *Int. J. Res. Stud. Manag.* **2015**, *4*, 37–58. [CrossRef]
24. Baert, K.; Van Huffel, X.; Wilmart, O.; Jacxsens, L.; Berkvens, D.; Diricks, H.; Huyghebaert, A.; Uyttendaele, M. Measuring the safety of the food chain in Belgium: Development of a barometer. *Food Res. Int.* **2011**, *44*, 940–950. [CrossRef]
25. FSL. *The Food Safety Law of the People's Republic of China*; National People's Congress: Beijing, China, 2019.
26. World Health Organization (WHO). Food Safety: Key Facts. Available online: https://www.who.int/NEWSROOM/FACT-SHEETS/DETAIL/FOOD-SAFETY (accessed on 4 September 2020).
27. Min, S.; Xiang, C.; Zhang, X.-H. Impacts of the COVID-19 pandemic on consumers' food safety knowledge and behavior in China. *J. Integr. Agric.* **2020**, *19*, 2926–2936. [CrossRef]
28. Fung, F.; Wang, H.-S.; Menon, S. Food safety in the 21st century. *Biomed. J.* **2018**, *41*, 88–95. [CrossRef]
29. Alrasheed, A.; Connerton, P.; Alshammari, G.; Connerton, I. Cohort study on the food safety knowledge among food services employees in Saudi Arabia state hospitals. *J. King Saud Univ. Sci.* **2021**, *33*, 101500. [CrossRef]
30. Chen, X.; Lyu, H.; Zhang, J.; Bai, L.; Wang, J. National Food Safety Standards Related to Microbiological Contaminants in China: Recent Progress and Challenges. *Foodborne Pathog. Dis.* **2021**, *18*, 528–537. [CrossRef]
31. Liu, Z.; Mutukumira, T.N.; Chen, H. Food safety governance in China: From supervision to coregulation. *Food Sci. Nutr.* **2019**, *7*, 4127–4139. [CrossRef]
32. Jia, C.; Jukes, D. The national food safety control system of China e a systematic review. *Food Control* **2013**, *32*, 236–245. [CrossRef]
33. Gao, C.; Xu, J.; Liu, Y.; Yang, Y. Nutrition Policy and Healthy China 2030 Building. *Eur. J. Clin. Nutr.* **2021**, *75*, 238–246. [CrossRef]
34. State Council. *Opinions on Deepening Reform and Strengthening Food Safety Work*; The State Council (SC) of China: Beijing, China, 2019.
35. Babashahi, M.; Omidvar, N.; Joulaei, H.; Zargaraan, A.; Zayeri, F.; Veisi, E.; Doustmohammadian, A.; Kelishadi, R. Scrutinize of healthy school canteen policy in Iran's primary schools: A mixed method study. *BMC Public Health* **2021**, *21*, 1566. [CrossRef] [PubMed]
36. Da Vitória, A.G.; Oliveira, J.D.S.C.; Pereira, L.C.d.A.; de Faria, C.P.; José, J.F.B.D.S. Food safety knowledge, attitudes and practices of food handlers: A cross-sectional study in school kitchens in Espírito Santo, Brazil. *BMC Public Health* **2021**, *21*, 349. [CrossRef]
37. Sibanyoni, J.J.; Tabit, F.T. Assessing the Food Safety Attitudes and Awareness of Managers of School Feeding Programmes in Mpumalanga, South Africa. *J. Community Health* **2016**, *42*, 664–673. [CrossRef]
38. Teffo, L.A.; Tabit, F.T. An assessment of the food safety knowledge and attitudes of food handlers in hospitals. *BMC Public Health* **2020**, *20*, 311. [CrossRef]
39. Sani, N.A.; Siow, O.N. Knowledge, attitudes and practices of food handlers on food safety in food service operations at the Universiti Kebangsaan Malaysia. *Food Control* **2014**, *37*, 210–217. [CrossRef]
40. Reilly, K.L.; Reeves, P.; Deeming, S.; Yoong, S.L.; Wolfenden, L.; Nathan, N.; Wiggers, J. Economic analysis of three interventions of different intensity in improving school implementation of a government healthy canteen policy in Australia: Costs, incremental and relative cost effectiveness. *BMC Public Health* **2018**, *18*, 378. [CrossRef] [PubMed]
41. Mirriam, E.N.; Rol, N.; Nyenje, M.E.; Ndip, N. The challenges of foodborne pathogens and antimicrobial chemotherapy: A global perspective. *Afr. J. Microbiol. Res.* **2013**, *7*, 1158–1172. [CrossRef]
42. Mellou, K.; Sideroglou, T.; Potamiti-Komi, M.; Kokkinos, P.; Ziros, P.; Georgakopoulou, T.; Vantarakis, A. Epidemiological investigation of two parallel gastroenteritis outbreaks in school settings. *BMC Public Health* **2013**, *13*, 241. [CrossRef] [PubMed]
43. Churchill, G.A., Jr. A Paradigm for Developing Better Measures of Marketing Constructs. *J. Mark. Res.* **1979**, *16*, 64–73. [CrossRef]
44. Kline, R.B. *Principles and Practice of Structural Equation Modeling*, 4th ed.; Guilford Press: New York, NY, USA, 2018.
45. Diamantopoulos, A.; Siguaw, A.J. *Introducing LISREL: A Guide for the Uninitiated*; SAGE Publications: London, UK, 2000.
46. Bagozzi, R.; Yi, Y. On the evaluation of structural equation models. *J. Acad. Mark. Sci.* **1988**, *16*, 74–94. [CrossRef]
47. Browne, M.W.; Cudeck, R. Alternative Ways of Assessing Model Fit. *Sociol. Methods Res.* **1992**, *21*, 230–258. [CrossRef]
48. Fornell, C.; Larcker, D. Evaluating structural equation models with unobservable variables and measurement error. *J. Mark. Res.* **1981**, *18*, 39–50. [CrossRef]
49. Hamuel, J.D. Microbiological contamination of the hands of food handlers as indicator of hand washing efficacy in some convenience food industries in South Africa. *Pak. J. Med Sci.* **2014**, *30*, 755–758. [CrossRef]
50. Tuglo, L.S.; Agordoh, P.D.; Tekpor, D.; Pan, Z.; Agbanyo, G.; Chu, M. Food safety knowledge, attitude, and hygiene practices of street-cooked food handlers in North Dayi District, Ghana. *Environ. Health Prev. Med.* **2021**, *26*, 54. [CrossRef]
51. Kwol, V.S.; Eluwole, K.K.; Avci, T.; Lasisi, T.T. Another look into the Knowledge Attitude Practice (KAP) model for food control: An investigation of the mediating role of food handlers' attitudes. *Food Control* **2020**, *110*, 107025. [CrossRef]
52. Suryani, D.; Sutomo, A.H.; Aman, A.T. The Factors Associated with Food Safety Practices on Food Handlers in Primary School Canteens. *Unnes J. Public Health* **2019**, *8*, 1–9. [CrossRef]
53. Ha, J.; Jang, S. Effects of service quality and food quality: The moderating role of atmospherics in an ethnic restaurant segment. *Int. J. Hosp. Manag.* **2010**, *29*, 520–529. [CrossRef]
54. Stevens, P.; Knutson, B.; Patton, M. Dineserv: A Tool for Measuring Service Quality in Restaurants. *Cornell Hotel Restaur. Adm. Q.* **1995**, *36*, 56–60. [CrossRef]

55. Andaleeb, S.S.; Conway, C. Customer satisfaction in the restaurant industry: An examination of the transaction-specific model. *J. Serv. Mark.* **2006**, *20*, 3–11. [CrossRef]
56. Trafialek, J.; Czarniecka-Skubina, E.; Kulaitienė, J.; Vaitkevičienė, N. Restaurant's Multidimensional Evaluation Concerning Food Quality, Service, and Sustainable Practices: A Cross-National Case Study of Poland and Lithuania. *Sustainability* **2019**, *12*, 234. [CrossRef]
57. Baek, E.; Choo, H.J.; Lee, S.H. Using warmth as the visual design of a store: Intimacy, relational needs, and approach intentions. *J. Bus. Res.* **2018**, *88*, 91–101. [CrossRef]
58. Chebat, J.-C.; Michon, R. Impact of ambient odors on mall shoppers' emotions, cognition, and spending. *J. Bus. Res.* **2003**, *56*, 529–539. [CrossRef]
59. Tong, C.; Wong, A.T.-T.; Cheng, T. Do Corporate Social Responsibility and Safety of Food Affect Reputation? A Study of Fast-food Restaurants Industry in Hong Kong. *J. Econ. Manag. Trade* **2019**, *22*, 1–18. [CrossRef]
60. Harris, K.J.; DiPietro, R.B.; Line, N.D.; Murphy, K.S. Restaurant employees and food safety compliance: Motivation comes from within. *J. Foodserv. Bus. Res.* **2019**, *22*, 98–115. [CrossRef]