



Chinese consumers food purchasing behaviors and awareness of food safety



A. Liu*, R. Niyongira

College of Economics & Management, Nanjing Agricultural University, China

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ABSTRACT

This study examines consumer food purchasing behavior and awareness of food safety in China. We surveyed a total of 1015 consumers in Nanjing and Beijing and the results showed that consumers with a lower level of education tend to be less concerned about certain food safety factors compared to those with a higher level of education. The respondents with higher food expenditures were also more concerned about food safety than those who spent less money on food. Women, families with children or elderly people were also more concerned. Consumers in the used sample preferred to buy food from a super-market; paid more attention to the expiration date on the food label, food color and the nutritional content of food products. Consumers had little knowledge of who was responsible for food safety in China; therefore educating consumers on who was responsible for food safety in China may help mitigate consumers' concerns.

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1. Introduction

Food safety incidents in China have pushed consumers to become more aware of food safety and to become more skeptical when buying food products. These food safety incidents originate from a range of factors including but not exclusive the overuse of agricultural inputs on the land; and in response to pressure put on agricultural land from other uses such as infrastructure, industrialization, and property development (FORHEAD, 2014). The overuse or misuse of agricultural inputs leads to water pollution and algal blooms, heavy metal, deficiencies of some micronutrients (I, Fe, Zn), and other incidents such as pesticide residues in plants and animals, growth hormones, antibiotic and anti-parasitic in food (Jia & Jukes, 2013; Lam, Remais, Fung, Xu, & Sun, 2013; Wang, Zhang, & Ortega, 2013).

The problem with supervision and difficulty in traceability systems are also mentioned by researchers as the source of food safety incidents due to a large number of small and fragmented producers, processors and traders. The fragmentation of the industry also may lead to deceitful behaviors by cutting costs through cheating and use of unlawful additives in food processing to overcome high competition in market. The supervision problem is also

linked with several government entities working on food safety and that leads to lack of oneness and coordination, lack of law enforcement, asymmetric information, overlapping responsibilities, even to corruption (Jia & Jukes, 2013; Lam et al., 2013; Ortega, Wang, Wu, & Olynk, 2011; Wang et al., 2013).

The policy that exempt a business from further inspection after 3 successful inspections, inadequate labeling, lack of manufacturer registrations during processing and handling, low punishment in case of violation due to lack of laws, and outdated or missing standards are other problems that contribute to food safety scandals (Jia & Jukes, 2013; Wang et al., 2013). Therefore the aforementioned problems led to food safety incidents that resulted in changes in consumers behaviors.

The changes in the food market are not only from food safety incidents and growing health consciousness but also from rising incomes and urbanization (Jongwanich, 2009). The rising income is accompanied by an increase in frequency of eating out, and the consumption of high protein, high sugar and processed foods i.e., sea food, dairy products, eggs, meat, fruits, confectionary, sugar, soya products, and alcohol. The increase in income also provides consumers with more purchasing power, and leads them to choose higher quality and safe food products. However, a decrease in consumption of grains, tubers, vegetables and legumes was observed (Cao et al., 2013; FORHEAD, 2014; Garnett & Wilkes, 2014).

As Chinese consumers face diverse problems regarding food

* Corresponding author.

E-mail address: liuaj@njau.edu.cn (A. Liu).

safety, this research aims to analyze Chinese consumer awareness and perception of food safety that lead to trust in entities in charge of control and management of food safety. Brewer, Sprouls, and Russon (1994) cited by (Ergönül, 2013) found that consumers chose safe food based mainly on the following factors: chemical issues (e.g. hormones and food additives), health issues (e.g. cholesterol content and nutrient imbalance), spoilage issues (e.g. microbiological level and contaminations), food regulatory issues (e.g. food inspection and labels), deceptive practices (e.g. weight-loss diets) and ideal situations (e.g. length of time for pesticide safety assessment).

Previous research in China found the behaviors of Chinese consumers to be influenced by price. Consumers who are more price sensitive found safe food to be more expensive; therefore, Chinese consumers only are occasionally buyers of safe food. However, being price sensitive is not the only reason for this behavior, but also inconsistency in the interpretation of what is classed 'safe food' and the lack of detailed knowledge about production standards or quality controls for safe food (Liu, Pieniak, & Verbeke, 2013). If the consumers don't know who is in charge of managing, controlling and inspecting food safety in China, this will lead to less trust and confidence in food safety regulation and enforcement. However, confidence and trust are also somewhat dependent on consumer behavior beyond what can be controlled by enforcement official such as poor personnel hygiene, improper handling of food and contaminated food surfaces or equipment at home. Consumers have the choice in terms of where to buy, and how to cook and eat their food (FDA, 2010).

This research seeks to identify what factors contribute to Consumer awareness of food safety which subsequently impacts Consumer confidence in food safety and proposes how food suppliers and the Government in China can recover Consumer confidence in the domestic food supply chain.

2. Survey design and data collection

The survey was completed between September and December 2012. The questionnaire was administered to 1015 respondents from Beijing and Nanjing. The feedback was collected from 577 respondents in 9 districts of Beijing and 438 in 5 districts Nanjing respectively through convenience sampling. The responds were approached in the Central Business District (CBD) along streets, in the parks and restaurants and they were interviewed face to face. The questionnaire used in this research consisted of four sections: the first section contained questions asking about the respondent's socio-economic and demographic information, the second section related to the respondent's purchasing behaviors and attitudes, the third section included questions about their awareness and knowledge of food safety, and lastly the fourth section had questions related to the satisfaction of food safety management. The data was analyzed using SPSS 16 version with the significance level of 0.05 and lower ($P = 0.05$).

Among the surveyed respondents, 53.6% were women as they take more responsibility for shopping and preparing food. Table 1 shows the majority (being 51.9%) of respondents were aged between 16 and 35, followed by the second group (43.5%) of respondents aged between 36 and 65, and minority (4.5%) being elderly members (above 65). The family size of 3 or 4 people (66.7% both) dominated the sample; a large number (30.3%) of respondents had a gross household income of RMB 50,000 to RMB 100,000, followed by a second group (28.2%) of respondents having a gross household income of RMB 30,000 to RMB 50,000. The majority of respondents had a medium level of education (47.8%), which reflects the considerable number of people who have more than 9 years of formal education in these cities. Families without

members that were not working or retired (60.2%) dominated the families of respondents; while 50.6% of the families of respondents had children who were under 20 years of age and who were still in school.

3. Results

3.1. Consumer purchasing behavior

The monthly per capita food expenditure per family indicated that 46.4% of respondents spent less than RMB 1000 per month on food which was the biggest group of respondents, followed by (35.4%) of respondents who spent RMB 1000 - RMB 2000 and the smallest share of respondents (18.2%) spent more than RMB 2000 per capita on food.

The super-market was reported by many respondents (41.1%) to be the place where they bought food last time, followed by the wet market (16%) and convenient stores (13.2%) among shopping areas. The consumers were also asked to name the factors that affect their concern when they purchase food, on a 4-scale Likert, where 4 means "very concerned" and 1 means "not concerned at all"; the shelf life of the product i.e. the expiry date was ranked first ($M = 3.56$), followed by food color ($M = 3.24$) and nutritional content ($M = 3.23$) as the top three factors considered when consumers make a purchase. Table 2 presents the results of factors considered by consumers when they buy food products.

3.2. Consumers' concerns about food safety

Fig. 1 showed that the respondents had a high concern in food hygiene (52.0%), followed by food poisoning (45%), food additives (37.5%) and expiry date (36%) as the top four concerns.

When the respondents were asked if they were aware of the level of food hygiene in the places where they purchased their food 96% of them confirmed awareness of it. Regarding the question on how they knew about the hygiene standards of the places where they bought food from or eat out at, the main ways respondents assessed the hygiene of where they bought food was through word of mouth (55.3%) (i.e. the information from their friends, family and key informants), general appearance of premises (48.5%), the reputation (48.5%), appearance of staff (36.8) and hygiene sticker (36.7) stated in that order.

As for the question on food ingredients that are problematic to consumers, the main food issues of general concern for the respondents was the amount of total fat in food and the amount of saturated fat in food (both at 61%), amount of protein in food 38.3%, vitamin content (36.3%) and amount of sugar (30.6%) which showed that the major concern was proportion of nutrient being either insufficient or in excess of metabolic needs (nutritionally imbalanced food). In the food industry (as whole), the respondents were more concerned about the food price (65.6%) and food waste (23.9%) while fewer people are concerned about animal welfare (11.1%) and food mile (10.8%).

From the survey results, 83% of the respondents were more concerned about the safety of food sold locally at restaurants, fast food store, and take away (processed food), whilst 85% of them confirmed concerns about the safety of food sold locally at super-markets, shops and food markets (fresh food).

3.3. Satisfaction of food safety management

The satisfaction of food safety management showed that Consumer perception and beliefs were shaped by knowledge, which was the product of exposure to information sources and personal effort in obtaining information Wilcock, Pun, Khanona, and Aung

Table 1
Demographic and Socio-Economic variables.

		Percent			Percent
Gender	Male	46.4	Gross household income (RMB)	<30,000	11.1
	Female	53.6		30,000 to 50,000	28.2
Age	16–35	51.9		50,000 to 100,000	30.3
	36–65	43.5		100,000 to 130,000	19.0
	>65	4.5		130,000 to 150,000	9.6
Family size	1	2.0	Education ^a	>150,000	1.9
	2	12.7		Low level	15.1
	3	46.5		Medium level	47.8
	4	20.2		High level	37.1
	5	14.5	Retired people/family	With	39.8
	6	3.5		Without	60.2
	7	.3	Children/family	With	50.6
	8	.2			
	9	.1		Without	49.4

^a Education: low level “less than 9 years of education”, Medium level, “9–14 years of education”, and high level “over 16 years of education”.

Table 2
Factors considered by consumers while buying.

	Mean#	Std. Deviation
Convenient to cook	2.75	.914
Production and processing factories	2.90	.893
Relevant inspection certificate	2.91	.950
Brand	3.10	.798
Price	3.12	.827
Nutritional content	3.23	.811
Food color	3.24	.760
Shelf life	3.56	.696

Note: Scores were on a 4-point Likert scale from 4 = “very concerned” while 1 = “not concerned at all”.

(2004) referring to McIntosh, Christensen, & Acuff, (1994). In terms of satisfaction with the safety system in the period when the survey was conducted, 46.2% of respondents showed a relative dissatisfaction with the system, while 30.1% of them were totally dissatisfied with the food safety management system.

A large number of respondents had occasionally or often heard of the food safety problem being reported (71.1%). From this research 56.6% of respondents ranked the State General Administration of Quality Supervision, Inspection and Quarantine being responsible of food safety management in China as well known

(Table 3), 53.6% of them gave the State Food and Drug Administration, followed by the Administrative Department for Industry and Commerce (41.7%).

Due to too many actors involved, the responsibility is not clear. In 2013 however, the government organize a new regulatory system for the food safety.

3.4. Relationship among variables

In order to study the relationship between variables, a regression was conducted. The regression of concern about safety of processed food (sold at restaurants, fast food and take away chains) was taken separately from the concern about the safety of fresh food (sold at supermarkets, shops and wet markets), as consumers have greater trust in food prepared by them (Table 4). The independent variables selected in both cases were namely: family per capita food expenditure per month, if someone had heard of a reported food safety incident, if s/he was aware of hygiene levels in the place where the food was sold, his or her gender, age and level of education. The research showed that the choice of food purchased and food safety knowledge are related to social demographic factors. The variables like income, expenditure, age, education, family composition were included in regression to test their significance.

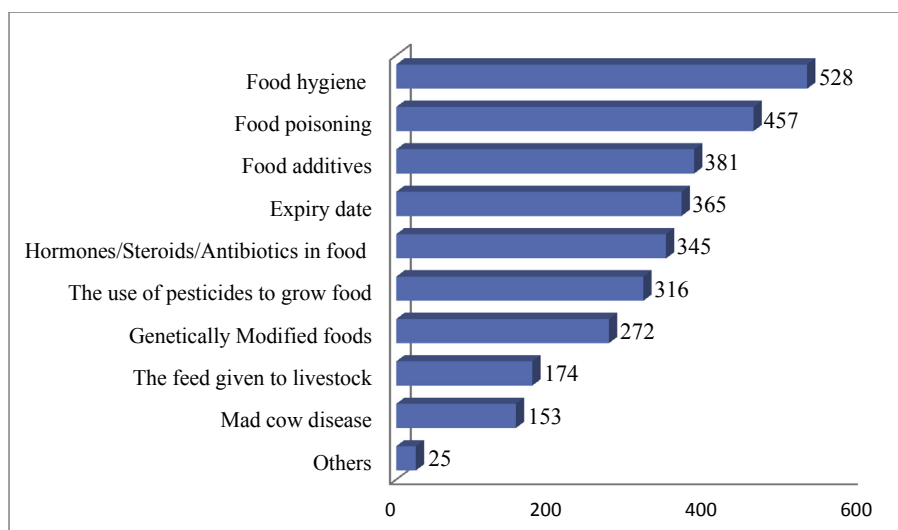


Fig. 1. Food issue that consumers are concerned about.

Table 3
Responses to who is responsible of food safety in China.

	Frequency	percent
The State General Administration of Quality Supervision, Inspection and Quarantine	574	56.6
State food and Drug Administration	544	53.6
The Administrative Department for Industry and Commerce	423	41.7
Police	374	36.8
The Administrative Health Department of the State Council	369	36.4
National Disease Prevention and Control Institutions	357	35.2
Customs	350	34.8
The State Administration for Entry Exit Inspection and Quarantine Departments	287	28.3
The State Administration of Production Safety Supervision and Management	285	28.1
Agriculture Department	285	28.1
Department of Commerce	209	20.6
Others	26	2.6

Table 4
Regression on concern of processed food sold.

Variables	Coefficient	Std. Error	P Value
(Constant)	1.782	.204	.000
Family per capita monthly food expenditure	-.092	.036	.010
Aware of hygiene standards	.382	.048	.000
Have you heard food incident reports	-.089	.031	.005
Gender	-.034	.053	.522
Age	.020	.048	.674
Education	-.012	.040	.765

Dependent variable: concern of processed food

The concern of processed food was expressed on 5 Likert Scale: 1 = “very concerned”, 3 = “neutral” and 5 = “very unconcerned” Have you heard of food safety problems reported was expressed on 4 Likert scale: 1 = “never” and 4 = “often”.

For the processed food, the ANOVA test revealed that the concern about processed food sold locally increased with the awareness of hygiene levels in the places where the food is sold. The ANOVA test also revealed that the concern of processed food sold locally decreased if someone has heard of food safety incident reports, which means that consumers would reduce their purchases from the locations where processed food was sold last time if food safety incidents had occurred.

The level of concern of processed food sold locally decreased with the per capita monthly food expenditure, which means that the family spending more money on processed food had a lower concern for their food safety; this confirms the relationship between an increased consumption of processed food with an increase of income.

For the fresh food sold locally the ANOVA test (Table 5) revealed

Table 5
Regression on concern of fresh food sold.

Variables	Coefficient	Std. Error	P value
(Constant)	1.429	.192	.000
Family per capita monthly food consumption	-.047	.033	.164
Aware of hygiene standards	.461	.044	.000
Have you heard food incident report	-.045	.029	.128
Gender	-.047	.049	.340
Age	-.073	.045	.104
Education	.030	.038	.428

Dependent Variable: concern of fresh food

The concern of fresh food was expressed on 5Scale-Likert: 1 = “very concerned”, 3 = “neutral” and 5 = “very unconcerned” Have you heard of food safety problems reported was expressed on 4Scale-Likert: 1 = “never” and 4 = “often”.

that the concern of fresh food sold locally increases ($\beta = 0.461$) with the awareness of hygiene of the places where they sell fresh food (local shops, supermarkets, and food markets).

One way ANOVA was used to compare the means (Table 6), and the results showed that seniors were less concerned about the brand ($M = 2.74$) and convenience of cooking the food ($M = 2.30$) compared to each of the other remaining groups. The production and processing factories were exceptional in this way, its overall ANOVA results in pairwise comparison were significant ($P = 0.015$) in Means difference between middle aged consumers and the young who were less concerned, though the whole group was homogeneous (i.e. Means were very close). The young consumers tended not to have family (no children, old people, or pregnant wife) which might be the reason of a low concern in production and processing factories. Redmond and Griffith (2004) found that the perceived personal responsibility for food-related safety increased with age.

The ANOVA results revealed also that, the Mean of respondents with lower education level ($M = 2.60$) were completely different from respondents with a medium level of education ($M = 2.81$) in terms of the convenience of cooking the food. All of the respondents of lower education ($M = 2.94$) had a low level of concern for brand than respondents with high level of education ($M = 3.20$), they also differed in a reverse way in terms of price, as people with a high level of education ($M = 3.03$) were less concerned with price compared to respondents with a low level of education ($M = 3.24$). Concerns related to product shelf life also differed amongst respondents with different levels of education, high ($M = 3.66$), medium ($M = 3.51$) and low ($M = 3.50$) respectively. Here we can see that lower levels of education affects the knowledge of and the type of concerns consumers have about food safety. Education enables access to information and consumer confidence in safe food is linked to the level of knowledge and expertise a consumer has about food safety (Grunert, 2005).

The analysis of per capita monthly expenditure on food in the family (Table 6) shows that respondents with a low expenditure on food ($M = 2.80$) were less concerned about production and processing factories than respondents with higher expenditures on food per month per capita in the family ($M = 3.08$). Expenditures on food also showed greater concern for respondents with higher food expenditures ($M = 3.21$) compared to middle level food expenditure ($M = 2.94$) and low level food expenditure ($M = 2.77$). In terms of having the relevant inspection certificates, the concern also appeared when a pair-wise comparison between the low and middle expenditures on food was run, in other words, the concern for food safety pushes consumers to pay a higher price when the relevant certificate is available. The concern for brand showed a significant difference among the three categories, as each behaved differently from the others. The concern as to whether the food has nutritional content differentiated the group with low expenditures on food ($M = 3.14$) from the group with high expenditures on food in the family ($M = 3.41$). The food color also differentiated the group with low expenditures on food ($M = 3.21$) with high expenditure on food in the family ($M = 3.37$). In total, the factors where the difference was observed, respondents with higher expenditure on food were more concerned about the safety of food.

The results of a regression of per capita family expenditure on food (taken as the dependent variable) and factors considered by consumers while buying (taken as independent variables) are presented in Table 7. The factors considered by consumers related to concerns about food safety are namely: price, production and processing factories, brand, availability of certificate of inspection, shelf life of product (expiry date), food color, nutritional content and convenience to cook. Price was significant, which means the increase in one unit of price concern decreases the per capita family

Table 6
Means differences through multiple comparisons.

	M	Age			Education			Expenditure		
		Young	Middle age	Senior	Low	Medium	High	low	Middle	High
Convenient to cook.	2.75	2.74 ^B	2.80 ^B	2.30 ^A	2.60 ^A	2.81 ^B	2.72 ^{AB}	2.73	2.68	2.92
Production and processing factories	2.90	2.83	2.99	2.78	2.97	2.89	2.87	2.80 ^A	2.93 ^A	3.08 ^B
Relevant inspection certificate	2.91	2.91	2.92	2.70	2.83	2.95	2.89	2.77 ^A	2.94 ^A	3.21 ^B
Brand	3.10	3.12 ^B	3.12 ^B	2.74 ^A	2.94 ^A	3.08 ^{AB}	3.20 ^B	2.95 ^A	3.13 ^B	3.42 ^C
Price	3.12	3.07	3.15	3.28	3.24 ^B	3.14 ^{AB}	3.03 ^A	3.17	3.08	3.04
Nutritional content	3.23	3.22	3.25	3.13	3.16	3.21	3.28	3.14 ^A	3.2 ^{AB}	3.41 ^B
Food color	3.24	3.26	3.23	3.13	3.17	3.23	3.29	3.21 ^A	3.21 ^A	3.37 ^B
Shelf life	3.56	3.53	3.59	3.61	3.50 ^A	3.51 ^A	3.66 ^B	3.56	3.56	3.59

Scores were on a 4-point Likert scale from 1 = “very concerned” while 4 = “not concerned at all”.

Age: young: 16–35, middle age: 36–65, senior: above 65. Monthly expenditure on food in family per capita: Low <1000 RMB, middle 1000–2000 and high >2000 RMB. Education: low level “9 years of education”, Medium level “10–14 years” and High level with 16 years and above of education. A and B are groups. There is no difference within A or B, while there is a difference between A and B. AB means that this group has a correlation with A and B at the same time.

monthly food expenditure of 0.261. In other words consumers who are sensitive to higher prices for safe food will reduce their purchase size if the price of safe food increases for one unit. Brand was also significant and this translates that an increase in the concern for safe food brands will increase with the money spent on food, the higher the concern in safe foods brand the higher the money spent. The last significant variable was the certificate of inspection. The concern related to the certificate of inspection will increase with money spent on food safety. Those who were more concerned to check if the certificate of inspection was present would accept to spending more on safe food.

The independent samples *t*-test (Table 8) showed that families with elderly members have a higher Means at $P < 0.05$ in factors like price and convenience to cook compared with families without elderly members. The Means of families with children under the age of 20 in school were higher compared with families without children under the age of 20 in school with factors like price and food color. When considering the gender the Means were different in terms of shelf life, food color and nutritional content where women had a higher mean than men.

4. Discussion of the results

The survey results showed that the supermarket is the first choice of respondents when they purchase food products, which is consistent with the findings of other research. For instance, Liu et al. (2013) reviewing several studies done in China, supermarkets were the main location for purchasing safe food, mostly because consumers have a high level of confidence in the safety and quality of food sold in supermarkets. The choice of supermarkets is linked with their availability, as there is an increase in large and small supermarkets in China, for example in 2004 supermarkets accounted for about 30% of urban food retail sales (Zhang & Pan,

2013). Several studies have shown that consumers who buy safe food at supermarkets have more knowledge, a greater willingness to pay a higher price and a higher frequency of safe food purchases. Super markets were followed by wet markets 16% and convenient stores 13.2% as (Liu et al., 2013) said farmers' markets, which have the advantage of lower prices, fresher and more diverse produce and being closer to people's homes or places of work are a strong competitor for supermarkets in China.

Food hygiene, food poisoning and food additives were the top three food safety concerns, which is contrary to the Liu, Pieniak, and Verbeke (2014) results, where food containing pesticides or veterinary drug residues and deteriorated food were ranked as third and fourth after counterfeit food and inferior food in terms of perceived personal risk. The research found that genetically modified foods occupy a similar level of concern compared to Liu et al. (2014) where they were perceived as presenting a low level of risk and worry to consumers in the same way as food additives.

The worries of total fat and saturated fats in food and other food ingredients that characterize nutritional imbalanced food (i.e. food with either fewer or more contents of the ingredient compared to normal standards) which make consumers unhealthy was not unique to the respondents of this survey. For example, Wilcock et al. (2004) found that people, who had a greater awareness of food borne microbes and concern about food safety issues, were more likely to reduce the consumption of animal proteins, though they were less likely to practice safe food handling than were those who did not perceive that they had experienced such an illness.

In the results, consumers gave a high score to police to be in charge of food safety, which shows inconsistency in knowledge of who is responsible for food safety in China. Ranking Government as the trustworthy and responsible group for food safety is consistent with the findings of Ortega et al. (2011). In their study, Ortega et al. (2011) found that Chinese consumers have the highest willingness-to-pay for a government certification program, followed by third-party certification, a traceability system, and a product-specific information label. However, Government, because of insufficient knowledge in who is responsible for food safety management in china, consumers were indifferent in terms of trust when searching for information related to food safety. Liu et al. (2014) found that the best knowledgeable source of information for consumers was medical doctors and research institutes; here the consumers associations were poorly ranked above producers as source of information.

The large difference observed between families with a high expenditure (more than 2000 RMB) on food and other families was similar to the Liu et al. (2013) results that showed families with a higher monthly per capita income had more knowledge about safe food and a higher likelihood to purchase it: a large price difference

Table 7
Regression of per capita family food expenditure on factors considered while shopping.

	Coefficients	Std. Error	P value
Constant	3.002	.357	.000
price	-.261	.065	.000
Production & processing factories	.037	.070	.600
Brand	.406	.075	.000
Shelf life	-.122	.081	.132
Food color	-.005	.075	.950
Nutritional content	.118	.074	.111
Certificate of inspection	.192	.065	.003
Convenient to cook	-.034	.060	.566

Dependent variable: Family per capita food expenditure every month

Table 8
Mean of independent *t*-test for factors considered.

	Elderly		Gender		Children	
	With	Without	Male	Female	With	without
Price	3.19 ^A	3.07 ^B	3.08	3.15	3.16 ^A	3.07 ^B
Production & processing factories	2.93	2.88	2.87	2.92	2.94	2.85
Brand	3.11	3.10	3.09	3.11	3.12	3.09
shelf life	3.55	3.57	3.51 ^B	3.61 ^A	3.58	3.55
Food color	3.20	3.27	3.19 ^B	3.29 ^A	3.29 ^A	3.20 ^B
Nutritional content	3.21	3.24	3.13 ^B	3.31 ^A	3.25	3.21
Certificate of inspection	2.89	2.92	2.90	2.92	2.92	2.90
Convenient to cook	2.84 ^A	2.68 ^B	2.75	2.74	2.78	2.71

The letter in Superscript means that the Means were significantly different at a significance level of 5 percent.

between safe food and conventional food provided a strong motivation to consumers to learn more about safe food.

The difference in Means manifested by respondents of lower levels of education confirmed previous research findings that show knowledge of food safety increases with education: educated buyers who are also main meal planners treat food safety as a very important problem because educated consumers pay more attention to the food safety incidents in comparison with consumers with low level of education (Liu et al., 2014). Wang, Zhang, Mu, Fu, and Zhang (2009) referring to Raspror, (2006) noticed that educated consumers can obtain food safety information in different ways such as the internet, mass media, and communication with friends and colleagues. People with at least some college education were more likely to believe they had experienced food borne illness than were people with less education (Wilcock et al., 2004).

The findings in these cities showed that women have a higher Mean in concern for safe food than men. The results coincided with other findings that have found that women paid more attention to food safety issues than men because they take more responsibility for buying and preparing food (Liu et al., 2014). The female taken as main meal planners were more likely to treat food safety as a very important issue. Liu et al. (2013)'s results in willingness to pay for safe food, also female were having more knowledge and willingness to pay for safe food than men. Though the difference in Mean between women and men about who have heard food safety case reported was insignificant, in Wilcock et al. (2004)'review, the American men were more likely to report risky practices than women. The difference in Mean also observed showed that the families with elderly members and children have more knowledge compared to families without them. Elderly members, pregnant women and children are vulnerable groups with unsafe food; the same way, the people with weak immune systems are more vulnerable with unsafe food.

5. Conclusions

The results showed that concerns about food safety are higher among consumers with higher expenditure on food, which explains why they tend to buy in the supermarkets. The awareness of a given case reported of a food safety problem has a negative impact on the decision to buy either fresh or processed food. Consumers presented more concerns about food hygiene, food poisoning, food price, and nutrition imbalance. The vague knowledge of which institutions were in charge of food safety in China is an opportunity to educate the consumers on which departments and agencies are responsible for food safety; one of the reasons that explain why consumers were not satisfied with the food safety system. The education will help mitigate the concerns about food safety. Women, highly educated consumers and families with children and elderly members presented a high concern about safe

food in many factors while purchasing. We can suggest putting more emphasis in educating consumers with lower levels of education and income about the importance of taking safe food for their health as they are found less knowledgeable and concerned about food safety.

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