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Research Paper

Food Safety in Culinary Businesses in Rural and Urban Tourism Villages to Ensure Tourists' Health and Sustainable Tourism

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Abstract

Food is a basic necessity required by tourists during their travels; therefore, food service providers need to pay attention to the food safety of the items they sell to ensure the health and satisfaction of tourists. This research aims to assess the food safety in culinary businesses in both urban and rural tourist areas. The study was conducted in 60 culinary businesses in the West Java Tourism Village for rural areas and 60 culinary businesses in the Tourism Village in DKI Jakarta for urban areas. The method employed is descriptive analysis to illustrate the food safety in tourist areas using a food safety assessment scoring instrument in both regions. Subsequently, a comparative analysis was performed to assess the differences in food safety between the two areas. The research results indicate that the food safety score in the West Java Tourism Village shows that 70% falls into the category of potentially risky but still safe for consumption, while 30% falls into the category of moderate food safety. The food safety score in the Jakarta Tourism Village shows that 38% falls into the category of potentially risky but still safe, 37% falls into the moderate food safety category, and 25% falls into the good food safety category. The comparison of food safety scores in rural and urban areas reveals a significant difference (Sig. 0.003 < 0.005), with the average food safety score in the rural tourism village being 47.77 and in the urban area being 73.23. This means that food safety in the urban tourism village is better compared to the rural area.

Keywords: *Culinary Business, Food Safety, Health of Tourists, Rural, Urban*

INTRODUCTION

Culinary delights serve as both a tourist attraction and a necessity for travelers during their journeys (Zahrulianingdyah, 2018). Suteja & Wahyuningsih (2019) state that the culinary sector, comprising food and beverages, plays a significant role in the tourism industry, besides tourist attractions in terms of attracting visitors. Consuming food at a destination provides a pleasurable sensory experience (Kivela & Crotts, 2006), and food serves as the focal point of visitors' experiences, playing a significant role in decision-making and tourist satisfaction (Hjalager & Richards, 2002). Therefore, culinary experiences can become a reason for tourists to revisit a destination solely to enjoy local cuisine (culinary tourism) and have great potential for further development (Saptaningtyas et al., 2021). Food vendors, especially those located around tourist destinations, whether in villages or cities, should strive to assure tourists that the food they provide is safe for consumption.

Food safety is one of the crucial factors considered by tourists when planning to travel. Good food safety in a tourist village can undoubtedly impact the sustainability of tourism and the local culinary scene. Lestari (2020) stating that food safety is the most crucial factor considered by tourists when traveling. Soon et al. (2016) that food safety is considered crucial as it can prevent foodborne diseases that may be present in food. Therefore, culinary businesses must maintain safety in preparing food in tourist areas, both in urban and rural settings.

Food safety is an absolute requirement, meaning that the consumed food must be safe, free from chemical, microbiological, and physical contaminants. WHO (2015), on World Health Day, the emphasis is placed on the importance of food safety through the slogan "How safe is your food?

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From farm to plate, make food safe." This statement serves as a reminder to the community or tourists to only consume food that is safe for their bodies in tourist areas. Therefore, the principles of food safety must be adhered to from production on the farm to serving at the dining table. This means that food safety is something that should be strived for or pursued to the fullest extent possible to realize conditions or assurances of food safety. Food is considered safe if it meets food safety standards, thereby preventing food from potential hazards that could harm human health (Yulianti et al., 2022) Unsafe food for consumption can lead to various diseases (Yahya et al., 2022). With this, tourists can be protected when consuming food in tourist areas.

LITERATURE REVIEW

Food Safety

Food safety is one of the crucial factors in the implementation of the food system. According to the general provisions of Government Regulation Number 86 of 2019 concerning Food Safety, the implementation of food safety is aimed at enabling the state to provide protection to the people by ensuring the consumption of food that is safe for health and life. To ensure that the food available in society is safe for consumption, it is necessary to implement food safety throughout the food chain, from the production stage to the hands of consumers. In the implementation of food safety, all activities or production processes, whether domestic or imported, aimed at producing food safe for consumption, must adhere to the application of food safety requirements.

According to the WHO, food safety is a discipline that addresses the preparation, handling, and storage of food or beverages to prevent contamination by physical, biological, and chemical substances. The primary objective of food safety is to prevent food and beverages from being contaminated by foreign substances, whether physical, biological, or chemical, in order to reduce the potential for illnesses resulting from food hazards.

Food Safety Score (FSS)

Food Safety Score (FSS) It is an instrument used to assess food production based on specific components to conclude food safety criteria of the resulting food products. The Food Safety Score (FSS) criteria include a good category if FSS is greater than or equal to 97.03%, moderate food safety if FSS is between 93.32-97.02%, food safety at risk but still consumable if FSS is between 62.17-93.31%, and food safety at risk and unsafe for consumption with a score below 62.17%. The purpose of the Food Safety Score (FSS) is to maintain and control food against all forms of contamination (Agil, 2010). The determination of Food Safety Scores (FSS) involves identifying four components, namely the Selection and Storage of Food Ingredients (SSF) covering eight parameters with a total score of 22 (15.94%), Cook's Hygiene (CH) covering eight parameters with a total score of 20 (14.49%), Food Ingredient Processing (FIP) covering 27 parameters with a total score of 77 (55.80%), and Food Distribution (FD) covering seven parameters with a total score of 19 (13.77%). Food safety is calculated by assigning scores to these four components. By calculating the FSS of a food production, the level of food safety produced can be determined (Mudjajanto, 1999).

Culinary Village Tourism

Tourist villages are a form of tourism development that emphasizes the contribution of the surrounding rural community and the conservation of the rural environment. Tourist villages offer cultural tourism products with strong traditional characteristics (Dewi et al., 2013). The potential diversity of traditional culinary delights is one of the key strengths in every tourist village. If each tourist village can process and present the produced food resources optimally, indirectly, the tourism sector at the rural level helps achieve the Sustainable Development Goals (SDGs) for 2030. These goals include eradicating hunger, alleviating poverty, and ensuring a healthy life. According

to the Minister of Tourism and Creative Economy Regulation No. 9, 2021 on Sustainable Destination Guidelines, there are four criteria for sustainable tourism: sustainable management, social and economic sustainability, cultural sustainability, and environmental sustainability. In the criteria for cultural sustainability, it is detailed that the diversity of food resources and the techniques of food processing, which are part of the gastronomic wealth of tourist villages, fall under the sub-criteria of intangible cultural heritage. This means that from the harvesting process to presentation and interpretation of the gastronomy of tourist villages, it is necessary to be done carefully and respectfully, involving the community at every stage. Equally important is to provide an authentic experience for visitors (Minister of Tourism and Creative Economy, 2021). Gastronomy, as a part of the local wisdom in the tourist village, when presented attractively and authentically, will ultimately educate tourists to get to know Indonesian culinary diversity more closely. This, in turn, automatically positions local food resilience as an effort towards realizing sustainable tourism.

RESEARCH METHOD

The research method employed in this study is quantitative research with a descriptive approach. This method is utilized to obtain an overview of the current situation or ongoing events by identifying food safety among culinary business operators.

The population in this study consists of culinary businesses in Tourist Villages in West Java (Cisaat Village and Suka Makmur) for rural areas and Tourist Villages in Jakarta, Betawi Village Setu Babakan for urban areas. The sample used includes 60 food consumers from Tourist Villages in West Java (rural) and 60 food consumers in Tourist Villages in Jakarta (urban) who meet the criteria of having storage, processing, and serving facilities or dining-in.

The research instrument used was the Food Safety Score (FSS) developed by Wijanarka & Waluyo (2007), consisting of four dimensions: the selection and storage of food ingredients (SSF), Cook's Hygiene (CH), Food Ingredient Processing (FIP), and Food Distribution (FD). In this study, the researcher used the Guttman scale. Each question has 2 alternative choices, with values assigned as (1) if the criteria are met and (2) if the criteria are not met. The Food Safety Score (FSS) criteria for produced food include categories of good, moderate, prone but safe to consume, and prone to be unsafe to consume (Wijanarka & Waluyo, 2007)

Data analysis employs descriptive statistics. Descriptive statistics are used to analyze data by describing or illustrating the collected data (Sugiyono, 2017). Additionally, data analysis involves the use of a difference test to compare food safety in two tourist areas: urban and rural tourist areas. The t-test is conducted by comparing the difference between two means with the standard error of the difference between the two-sample means (Ghozali, 2016). The T-Test difference test is performed using a non-parametric test employing the Kolmogorov-Smirnov test.

FINDINGS AND DISCUSSION

Analysis of Descriptions Based on the Dimensions of Food Safety Scores

The Food Safety Assessment (FSA) Score is the sum of the evaluations of four components, namely the Selection and Storage of Food Ingredients (SSFI), Cook's Hygiene (CH), Food Processing (FP), and Food Distribution (FD). The research findings indicate the distribution based on the categories of the food safety scale in the tourist and urban tourist village, as shown in Figure 1.

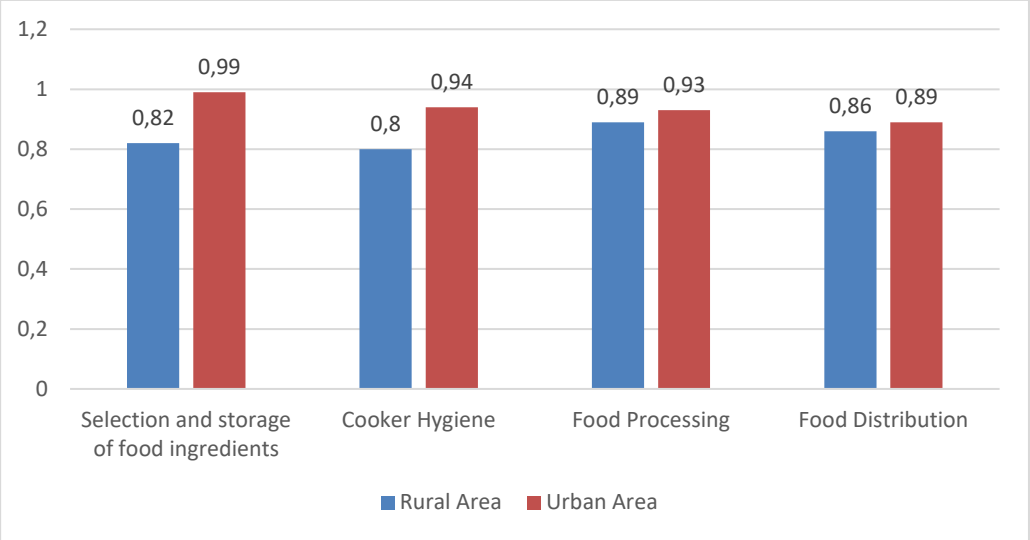

Figure 1. Food Safety Scale Values

Figure 1 observed that the Food Safety Scale in urban tourist areas is higher compared to rural areas, with an average food safety scale value of 0.94 for urban areas and 0.84 for rural areas. The highest scale in urban tourist villages is found in the SSFI dimension with a value of 0.99, indicating that business operators understand the importance of selecting and storing food ingredients as part of the initial stage in processing good quality food. The second-highest is CH or Cook's Hygiene, indicating that all food business operators there are very aware that personal hygiene can affect the quality of the food produced.

Foof Safety Category

The Food Safety Score (FSS) criteria for food produced include the categories good, moderate, vulnerable but safe to consume, and vulnerable not safe to consume. Food safety score criteria are in Figure 2.

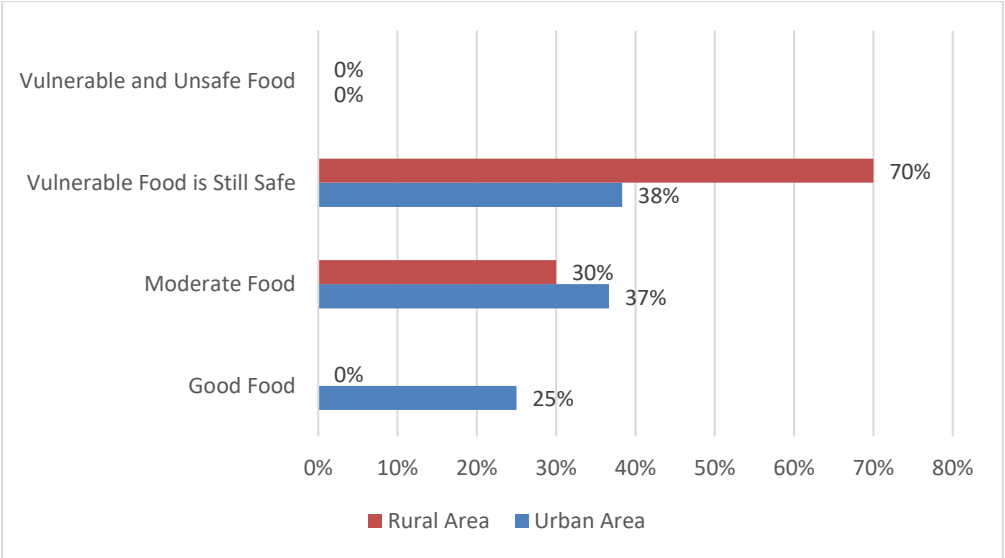

Figure 2. Food Safety Category

Figure 2 revealed that in the food safety category in rural tourism areas, most food businesses

fall into the food-prone category but are still safe to consume, only 30% of culinary businesses fall into the medium category. This shows that food safety carried out by culinary businesses in urban tourist villages is not good enough, so that culinary food safety there is at a tolerable threshold, namely vulnerable but still safe to consume.

In urban tourism villages, it shows that the food safety category is divided into 3 different categories with numbers that are not exactly far apart, namely from good food to vulnerable food which is still safe. This shows that 25% of culinary business actors in urban areas have been able to maintain good security, starting from the selection of ingredients, processing, presentation and personal hygiene of cooks. A proper processing process will create food with good food safety too. Apart from that, 37% of culinary business actors in urban areas are quite good but need to be improved because the food produced is still classified as medium food. However, in this urban tourist village there are still 38% of culinary business actors who are not good enough at maintaining food safety, which is shown by the large number of foods that are still on the threshold of consumption tolerance.

Differences in Food Safety in Urban and Rural Tourism Villages

Food safety scores in West Java and Jakarta Regional Tourism Villages were compared using the T-test to determine differences in rural and urban food safety conditions. The results of different tests are in Table 1.

Table 1. Descriptive Analysis Results

Ranks				
	Desa Wisata	N	Mean Rank	Sum of Ranks
SKP	Rural Area (Jawa Barat)	60	47.77	2866.00
	Urban Area (DKI Jakarta)	60	73.23	4394.00
	Total	120		

Table 1 showed that the number of respondents in rural tourism villages was 60 students, and respondents in urban tourism villages were 60 students. The average food safety score in the West Java Regional Tourism Village is 47.77 and the Jakarta Regional Tourism Village is 73.23. Thus, descriptively, food safety scores in rural and urban tourist villages have significantly different average food safety scores.

Table 2. Results of the Kolmogorov Smirnov Test of Differences (T-Test).

Test Statistics[a]		
		Food Safety Scores
Most Extreme Differences	Absolute	.333
	Positive	.333
	Negative	.000
Kolmogorov-Smirnov Z		1.826
Asymp. Sig. (2-tailed)		.003
a. Grouping Variable: Tourism Village		

Table 2 displayed that the Sig value. is 0.003 < 0.05, so it can be interpreted that it can be concluded that Ho is rejected, and Ha is accepted, which means there is a significant difference between culinary food safety in rural and urban tourism areas. Urban tourist villages have better culinary food security than tourist villages in rural areas.

This can be caused firstly by the level of education of food business actors in the tourist village. It is known that the percentage of elementary school education among business actors in rural tourist villages is quite high, namely 30%, while in urban areas it is only 17%. Middle school education among business actors in rural tourist villages is 30%, while in urban areas it is only 22%. And in rural areas only 38% of senior high school education is available, while in urban areas it is 58%. This is in line with research by Astuti (2018) which shows that the level of education and clean and healthy living behavior among angkringan traders also shows a significant relationship (P value 0.012).

Besides education, the second factor that can influence food safety in Tourism Villages is the gender of food business actors. It is known that there are more male traders in rural tourist villages than urban areas, namely 47% in rural areas and 35% in urban areas. The male gender has poor concern for personal hygiene compared to female respondents. This research shows that many male traders do not wear head coverings/hats and aprons, do not wear footwear when cooking, do not wash their hands before and after cooking, have long nails, and smoke when near food serving places.

Therefore, it is necessary to educate traders regarding how to improve food safety in tourist areas. This is because food is an important part of the tourism experience because it can influence tourists' health and decisions regarding travel and become their evaluation of future travel decisions. Food safety of food service providers is linked to travel and tourism because travelers can become ill from unsafe foodborne illnesses while they travel. Therefore, food safety is an important concern for tourists and tourist attractions.

CONCLUSIONS

The food security in the Rural Tourism Village (West Java) indicates that 70% falls into the category of vulnerable food but is still safe for consumption, and 30% falls into the category of moderate food security, with the lowest dimensions being cooking hygiene (0.85) and food distribution (0.88). The food security score in the Urban Tourism Village (DKI Jakarta) shows that 38% falls into the category of vulnerable food but still safe, 37% is of moderate security, and 25% is of good security, with the lowest dimension being food distribution (0.89) and the highest dimension being the selection and storage of food ingredients (0.99). The results of the comparison of food security scores in rural and urban areas indicate a significant difference (Sig. 0.003 < 0.005), with the average food security score in rural tourism villages being 47.77 and in urban areas being 73.23. Based on this, it shows that the food security in urban tourism villages is better compared to rural areas.

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REFERENCES

Agil. (2010). Identifikasi Skor Keamanan Pangan.

Astuti, F. D., & Suryani, D. (2018). Faktor-faktor yang berhubungan dengan perilaku hidup bersih dan sehat pada pedagang angkringan di kawasan malioboro yogyakarta. *Afiasi: Jurnal Kesehatan Masyarakat*, *3*(3), 79-86.

Dewi, M. H. U., Chafid Fandeli., & Baiquni., M. (2013). Pengembangan Desa Wisata Berbasis

Partisipasi Masyarakat Lokal di Desa Wisata Jatiluwih Tabanan, Bali. Kawistra, 3(2).

Dewi, N. M. N. B. S. (2021). Analisa Limbah Rumah Tangga Terhadap Dampak Pencemaran Lingkungan. Ganec Swara, 15(2), 1159–1164.

Ghozali, I. (2016). Aplikasi Analisis Multivariete Dengan Program IBM SPSS 23 (8th ed.). Badan Penerbit Universitas Diponegoro.

Hjalager, A., & Richards, G. (n.d.). Tourism and Gastronomic. London: Routledge. 2002.

Kamboj, S., Gupta, N., Bandral, J. D., Gandotra, G., & Anjum, N. (2020). Food safety and hygiene: A review. *International Journal of Chemical Studies*, *8*(2), 358-368.

Kivela, J., & Crotts, J. (n.d.). Tourism and Gastronomy: Gastronomy's Influence on How Tourists Experience a Destination. Journal of Hospitality and Tourism Research. 2006.

Lestari, T. R. P. (2020). Penyelenggaraan Keamanan Pangan sebagai Salah Satu Upaya Perlindungan Hak Masyarakat sebagai Konsumen. Jurnal Masalah-Masalah Sosial, 11(1), 57–72. https://doi.org/10.22212/aspirasi.v11i1.1523

Minister of Tourism and Creative Economy. (2021). Minister of Tourism and Creative Economy Regulation No. 9, 2021. Sustainable Destination Guidelines

Mudjajanto, E. S. (1999). Keamanan Pangan. Pelatihan Teknologi Keamanan Pangan Kudapan. Bogor : Jurusan GMSK Fakultas Pertanian IPB Dan Ditjen Dikdasmen, Depdikmas.

Saptaningtyas, R. S., Handayani, T., & Indriyani, N. K. A. I. P. (2021). Kajian Potensi wisata Kuliner Pantai Ampenan. Sade, 1(1), 14–19.

Soon, J.M., Manning L, W. C. (2016). Foodborne Disease: Case Studies of Outbreaks in the Agri-Food Industries. Boc: CRC Press.

Sugiyono. (2017). Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Alfabeta.

Suteja, I.W & Wahyuningsih, S. (2019). Strategi Pengembangan Potensi Kuliner Lokal dalam Menunjang Kegiatan Pariwisata di Kawasan Ekonomi Khusus Mandalika, Kabupaten Lombok Tengah. E-Jurnal Binawakya, 14(2).

WHO. (2016). estimates of foodborne diseases find children under 5 account for almost one third of deaths. http://www.who.int/mediacentre/news/releases/2015/

Wijanarka, A., & Waluyo. (2007). Skor Keamanan Pangan (SKP) Sebagai Indikator Dalam Penilaian Keamanan Pangan. Seksi Gizi Dinas Kesehatan Propinsi DIY.

Yahya, P. N., Ronitawati, P., Sitoayu, L., Sa'pang, M., & Nuzrina, R. (2022). Faktor-Faktor Yang Memengaruhi Praktik Keamanan Pangan Pada Penyelenggaraan Makanan Di Sekolah. Gizi Indonesia, 45(1), 47–58. https://doi.org/10.36457/gizindo.v45i1.543

Yulianti, R., Muhlishoh, A., Hasanah, L. N., Rosnah, Lusiana, S. A., & Sutrisno, E. (2022). keamanan dan ketahanan pangan. December, 1–136.

Zahrulianingdyah, A. (2018). Kuliner Sebagai Pendukung Industri Pariwisata Berbasis Kearifan Lokal. TEKNOBUGA: Jurnal Teknologi Busana Dan Boga, 6(1), 1–9. https://journal.unnes.ac.id/nju/index.php/teknobuga/article/view/16667

Zsarnoczky, M. B., Zsarnoczky-Dulhazi, F., Adol, G. F. C., Barczak, M., & David, L. D. (2019). Food safety challenges in the tourism processes. *Rural Sustainability Research*, *41*(336), 26-31.