

TECHNOLOGY-ENHANCED SAFETY MANAGEMENT PRACTICES REQUIRED FOR SUSTAINABLE HOTEL OPERATIONS IN ASABA, DELTA STATE, NIGERIA

¹ REV. SISTR. MARY EUCHARIA IJEOMA (Ph.D), ² ROSE KANGYANG DALYOP JAH, ³ NDUBUISI, CHIDINMA CONFIDENCE

ukijomah@gmail.com, rosekdjah@gmail.com, ndubuisi.chidinmaconfidence@gmail.com,
<https://orcid.org/0009-0009-8948-3152>

¹ Department of International Relations, Hospitality Management and Tourism Studies, Admiralty University of Nigeria, Ibusa, Delta State

² School of Secondary Education (Technical), Gombe.

³ Department of Home Economics and Hospitality Management Education, University of Nigeria, Nsukka

Corresponding Author: Ndubuisi, Chidinma C.
(ndubuisi.chidinmaconfidence@gmail.com)

Abstract

The study determined Technology-enhanced safety management practices required for sustainable hotel operations in Asaba, Delta State, Nigeria. It was guided by two specific purposes, two research questions and two null hypotheses. Descriptive survey research design was used and it was carried out in Asaba, Delta State, Nigeria. The population of the study was 1,500 respondents, comprising 133 hotel management staff, 982 hotel employees and 385 hotel guests from 32 registered hotels in Asaba. The sample size for this study was 316 which consisted of 79 hotel management staff, 126 hotel employees and 111 hotel customers/guests. Mixed sampling technique involving proportionate sampling, simple random sampling and accidental sampling techniques was adopted. A structured questionnaire was used for data collection. The questionnaire was face-validated by five experts, and trial tested with fifty (50) respondents. The data generated from the trial testing were analyzed using Cronbach Alpha reliability coefficient and it yielded 0.80 reliability coefficient. Data collection was carried out by the researcher with the help of three research assistants. Mean, standard deviation, and one-way ANOVA were used for data analyze. The results revealed 18 safety management practices currently adopted by hotels in Asaba, they include provision of safety management training for hotel staff ($X = 3.07$), proper maintenance of equipment and facilities ($X = 3.23$), installation of fire alarms and sprinkler systems ($X = 3.23$) among others. The findings further identified 10 technology-enhanced safety management practices required in hotel industry in Asaba, they are: installation of state-of-the-art security and surveillance systems ($X = 3.40$), use of advanced technology ($X = 3.04$), among others. The study concluded that it is essential for hotel management to adopt comprehensive safety protocols, invest in staff training, and utilize

technology to enhance safety measures. It was recommended among others that hotels should establish regular training sessions for all staff members focused on technology-enhanced safety protocols, emergency response, and customer service related to safety.

Key Words: Hotels, Safety, Safety Management, Enhanced, Required, Asaba, Delta State.

Introduction

The hotel industry in Asaba, Delta State, Nigeria, plays a critical role in supporting business travel, tourism, and conferencing due to the city's position as an administrative and commercial hub. Proximity to Asaba International Airport and major road networks has increased visitor inflow, creating opportunities for growth in the hotels in the region (Adetunji & Adebayo, 2022). Hotels are establishments that provide lodging, meals, and other services for travelers and tourists in exchange for payment (Bardi, 2016). It highlights the core functions of a hotel which are providing accommodation and related services to guests in exchange for payment; and it also emphasizes the commercial nature of the establishment and the range of services typically offered. According to Hayes and Ninemeier (2019), a hotel is a hospitality business that offers a variety of accommodations, amenities, and services to travelers, serving as a temporary home away from home. The authors also emphasized the role of a hotel as a temporary living space for travelers, providing not only accommodation but also a range of amenities and services to enhance the guest experience. It is an enterprise that offers paid accommodation, food, and other services to guests, typically located in urban or tourist areas and varying in size and style (Olsen, 2017).

The hotel industry encompasses the establishments that provide accommodation, food, and other services for travelers and tourists; and this includes hotels, motels, resorts, and other lodging establishments (Liu & Tse, 2020). Hotel industry as buttressed by Dwyer et al. (2021), refers to the commercial sector that caters to the lodging and hospitality needs of travelers, offering overnight accommodations, dining, and other services to guests for a fee. It encompasses a wide range of businesses, from luxury hotels to budget motels. Hotel industries play vital role in the tourism and hospitality sector, thereby contributing to the overall travel experience of individuals and groups (Enz, 2020).

Hotels play a significant role in shaping the overall travel experience for guests, as they provide a home-away-from-home environment. Kim and Oh (2021), Liang et al. (2020), and Kusmawan et al. (2022), demonstrate the need for hotels to provide a positive and memorable experience for

guests through thoughtful design, personalized service, and the integration of technology. These factors are crucial in shaping the overall perception and satisfaction of guests in the hotel industry. To effectively run hotel industry so as to achieve its goals, effective management is highly needed.

Hotel management refers to the efficient management and operation of a hotel establishment, including all aspects of planning, organizing, staffing, coordinating, directing, and controlling the activities within the hotel to achieve organizational goals and objectives (Woods & King, 2020). Hotel management according to Jones and Smith (2019), involves overseeing the day-to-day operations of a hotel, including guest services, housekeeping, food and beverage, human resources, revenue management, marketing, and finance. Effective hotel management on the other hand is described as the seamless integration of operational efficiency and superior customer experience to drive overall hotel performance and guest satisfaction (Kwortnik & Thompson, 2021). Effective hotel management goes beyond mere operational efficiency; it focuses on the integration of various departments such as front desk, housekeeping, food and beverage to create a cohesive experience for guests. Effective hotels prioritize recruiting, training, and retaining skilled employees and creating a positive organizational culture that empowers staff (Karatepe, 2021). One of the important aspects of hotel management is safety management practices.

Safety is a state of being free from harm or danger. Davis and Lockwood (2019) referred to safety as the feeling of security and well-being that individuals experience in a particular environment. Safety is the condition of being protected from danger, risk, or injury, it entails a proactive approach to minimize risks that could harm individuals (Alabi, 2020). Safety in the hotel industry is utmost important due to the high number of employees and guests present in a hotel at any given time. It emphasizes the importance of creating an environment in which guests and staff of hotel industries are protected from physical or psychological harm (Rosen, 2018).

On the other hand, safety practices are procedures and protocols aimed at ensuring the safety of individuals and properties (Akpan & Ibeh, 2020). It encompasses all the activities undertaken to maintain safety standards. In this study, safety practices can be referred to as proactive measures adopted in hotels to prevent the occurrence of accidents. Such proactive measures may include evaluating the need for surveillance cameras for guest security, regular inspection of swimming pool areas, and implementing guest feedback mechanisms to highlight any witnessed safety issues. All these operations help in enhancing hotel safety management practices.

Safety management is very crucial in day-to-day activities of individuals not only in hotels but in all spheres of human life. Chathoth (2016) defined safety management practices in the hotel industry as the systematic identification, assessment, and control of safety hazards to ensure the

well-being of guests and staff. According to Lundberg and Johansson (2018), safety management practices in the hotel industry encompass the enforcement of health and safety policies and procedures, including regular inspections of facilities and equipment to ensure compliance with regulations. It also encompasses the integration of technology, such as surveillance systems and emergency response apps, to enhance security and improve incident response effectiveness (Sheldon, 2019).

Safety management practices in hotel industries as stated by Choi (2020), include the use of technology such as keyless entry systems, surveillance cameras, and electronic safety and security systems. The adoption of these technologies can significantly enhance safety measures in hotels. Also, Gupta (2021), noted that another best safety management practice in hotel is conducting regular maintenance checks on equipment, facilities, and infrastructure. This practice can help identify and address safety hazards before they escalate. Enhanced communication systems within the hotel, such as two-way radios or mobile devices, can facilitate quick and effective response to emergency situations (Pizam, 2019). In addition, regular training of hotel employees on safety measures in the hotel is one of the best safety management practice hotels should adopt. Henderson and Brooks (2016) noted that conducting regular safety training sessions for hotel staff can ensure that they are well-prepared to handle emergency situations and uphold safety protocols in hotels especially those in Asaba, Delta State.

The hotel industry in Asaba, Delta State, Nigeria, is a vital component of the region's economy, serving both local and international guests. However, safety management practices in this sector have been scrutinized due to frequent incidents ranging from fire hazards to security breaches. Recent studies highlight that inadequate safety measures can lead to significant risks, impacting not only guest satisfaction but also the overall reputation and financial stability of hotels (Owojori et al., 2021). Also, reports indicate that hotels across Nigeria, including Delta State, have been linked to cases of ritual killings, sexual violence, robbery, and unauthorized access to guest rooms. In response, the Delta State government has reiterated the legal obligation for hoteliers to collect detailed guest information and provide security surveillance to support law enforcement. The Delta State Tourism Board has also strengthened monitoring, registration, and classification of hospitality establishments to prevent breaches of peace and security.

Despite these policies, compliance is inconsistent, particularly among small and medium hotels that lack financial and technical capacity for advanced safety systems. Empirical studies confirm these challenges. Nwaichi et al. (2023) developed a framework for fire safety management in Nigerian hotels using structural equation modeling and found that proactive risk assessment and structured frameworks are underutilized, increasing vulnerability to fire hazards. Odigie (2021) noted that compliance with post-COVID-19 standard operating procedures for cleaning, hygiene,

and safety directly influences guests' perception and re-booking intention in hotels in Edo and Delta States. Yet many hotels still struggle with consistent implementation due to cost and staff capacity constraints. These findings revealed that safety management in Asaba's hotel industry is fragmented and there is need to adopt technology enabled safety management for a sustainable hotel operation. Therefore, this study examined technology-enhanced safety management practices required for sustainable hotel industries in Asaba, Delta State, Nigeria.

Statement of the Problem

The hotel industry in Asaba, Delta State, Nigeria, is a vital component of the region's economy, serving both local and international guests. However, safety management practices in this sector have been scrutinized due to frequent incidents ranging from fire hazards to security breaches. Studies have shown that inadequate safety measures can lead to significant risks, impacting not only guest satisfaction but also the overall reputation and financial stability of hotels.

However, despite the global push for enhanced safety protocols, particularly in response to the COVID-19 pandemic, hotels in Nigeria and in Asaba particular have lagged in adopting comprehensive safety management practices. Research indicates that many hotels in developing regions fail to implement necessary safety protocols due to a lack of resources and training. This inadequacy not only endangers guests but also affects employee morale and retention.

However, there is insufficient research focusing on how hotels in Asaba can enhance their safety image to attract more customers. This situation raises concerns regarding the effectiveness of existing safety policies and the need for tailored strategies that address the unique challenges faced by the local hotel industry. Previous research highlights that many hotels do not comply with existing safety regulations due to a lack of enforcement and understanding of these regulations. This presents a critical gap in the knowledge of how hotels can enhance their safety management practices using technology. Hence, this study determined technology-enhanced safety management practices required for sustainable hotel operations in Asaba, Delta State, Nigeria.

Purpose of the Study

The main purpose of this study was to determine technology-enhanced safety management practices required for sustainable hotel operations in Asaba, Delta State, Nigeria. Specifically, the study ascertained:

1. safety management practices currently adopted by the hotel industry in Asaba and;
2. technology-enhanced safety management practices required in hotel industry in Asaba.

Research Questions

The following research questions guided the study:

1. What are the safety management practices adopted by the hotel industry in Asaba?
2. What are the technology-enhanced safety management practices required in hotel industry in Asaba?

Research Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance.

1. There is no significant difference in the mean responses of hotel management staff, hotel employees and hotel customers on the safety management practices currently adopted by the hotel industry in Asaba.
2. There is no significant difference in the mean responses of hotel management staff, hotel employees and hotel customers on the technology-enhanced safety management practices required in hotel industry in Asaba.

Research Methodology

The study adopted a descriptive survey design. This design was considered appropriate for this study because it involved the use of structured questionnaire to seek the opinions of hotel managers, hotel employees and hotel customers on the technology-enhanced safety management practices required for sustainable hotel operations in Asaba, Delta State, Nigeria. The study was carried out in Asaba. Asaba is a city located in the southern part of Nigeria, specifically in Delta State. Asaba is situated on the eastern bank of the Niger River, and it is the capital of Delta State. Asaba is known for its natural beauty, with lush greenery, rivers, and wildlife. Asaba is a vibrant and growing urban center, with modern infrastructure and facilities (Okolie & Okoli, 2020). Asaba has seen significant development in recent years, with the emergence of several hotels and hospitality establishments to cater for the growing demand from tourists and business travelers. Asaba houses many hotels namely: Grand Hotel, Best western plus Elomaz Hotel, Hotel Benizia, Hotel De copperfield, Nelrose Hotel, Orchid Hotels LTD, Seth Hotel, Asaba. It has also been observed that hotels in Asaba have experienced security challenges over the past years. All these features justified the reasons for choosing Asaba for this study.

The population of the study was one thousand five hundred (1,500) respondents. The population consisted of 133 hotel management staff, 982 hotel employees and 385 hotel guests from the thirty-two (32) registered hotels in Asaba, Delta State. The information on the number of registered hotels in Asaba, Delta State was obtained from Corporate Affairs Commission (CAC)

in Asaba, Delta State in 2024; the information on hotel staff strength (number of hotel management staff and hotel employees) were obtained from the various registered hotels in Asaba in June 2024. While the population of hotel guests were selected using convenience sampling. The names and location of the 32 registered hotels in Asaba that were studied. The hotel management staff that were studied include: the hotel manager, the hotel supervisors and every head of unit within the hotel; while the hotel employees that were studied were all categories of workers in the hotel with the exception of management staff or team; these include waiters/waitress, security personnel, cooks, room keepers and inter-alia. The hotel customers or guests studied were those that patronize hotels in Asaba which were available at the hotel on the day the questionnaires were administered to the hotels.

The sample size for this study was three hundred and sixteen (316) which consisted of 79 hotel management staff, 126 hotel employees and 111 hotel customers/guests from the 32 registered hotels in Asaba. The sample size was obtained using Taro Yamane formula. Mixed sampling technique involving proportionate sampling, simple random sampling and accidental sampling techniques was adopted. Proportionate sampling technique was used to allocate certain proportions/ percentages to the population constituents (hotel management staff, hotel employees and hotel guests) at the proportions of 25%, 40% and 35% respectively; simple random sampling technique was used to sample 2 hotel management staff and 4 hotel employees in each of the 32 hotels studied. Accidental sampling technique was used to sample hotel guests, that is, 2 guests for small hotels and 3 guests for big hotels that were available and accessible at the point of administering the data. This was carried out in all the 32 registered hotels in Asaba.

A structured questionnaire was used for data collection. It was developed by the researcher in line with the specific objectives of the study and through extensive literature review. The instrument was divided into two parts. Part 1 was designed to collect data on personal information about the respondents while Part 2 was designed to collect data on the two research questions 1 and 2, with each section answering one research question. It contained a total of 34 item statements. Section A has a total of 24 question items and was designed to collect data on research question one while Section B has a total of 18 question items and was structured to collect data on research question two. The questionnaire items have a four-point response options of Strongly Agree (S.A), Agree (A), Disagree (D) and Strongly Disagree (SD), with corresponding nominal values of 4, 3, 2, and 1 respectively.

The questionnaire was face-validated by five experts. Three experts from Department of Home Economics and Hospitality Management Education, University of Nigeria, Nsukka, and two managers from two different hotels in Asaba, Delta State. The vital suggestions made by the five experts were incorporated into the final draft of the instruments. The instrument

was trial tested with fifty (50) respondents in five (5) hotels in Port-Harcourt. The respondents consisted of 10 management staff, 20 hotel employees and 20 hotel guests in hotels in Port-Harcourt, Rivers State, Nigeria. That is, a total of 10 respondents were sampled in each hotel. The data generated from the trial testing were analyzed using Cronbach Alpha reliability method for the purpose of obtaining the internal consistency of the instrument used for the study. The data generated from the pilot testing were analyzed using Cronbach Alpha reliability coefficient and it yielded reliability coefficient of 0.80, which revealed that the instrument was reliable for the study.

A total of three hundred and sixteen (316) copies of the questionnaires were produced and distributed to the 32 registered hotels in Asaba; that is, 79 copies of the questionnaire were administered to hotel management staff; 126 copies of the questionnaire were administered to hotel employees and 111 copies of the questionnaire were administered to hotel customers/guests present in the hotel as at the time of visit. Each hotel was administered ten (10) copies of the questionnaires; that is 2 copies was given to the management staff of the hotel, 4 copies to the hotel employees, preferably top employees and long serving employees and 4 copies were administered to hotel guests or customers available in the hotel as at the time of visit. This was carried out by the researcher and three research assistants. After the questionnaire were collated, it was observed that some were not properly rated or ticked and they were not used for the final analysis. Thus, only the responses of 301 respondents comprising 75 hotel management staff, 120 hotel employees, and 106 hotel guests/customers were used in this study. This implied that only 95.25% of the instruments were used for data analysis.

Data collected from the instrument was analyzed using Mean, Standard Deviation, and ANOVA. Mean was used to answer the two (2) research questions. The decision rule was that any mean response whose value was 2.50 and above was “Agreed” by the respondents while any item whose mean value was below 2.50 was “Disagreed” by the respondents. Standard deviation was used to find out how close or far the responses of the respondents were to the mean. ANOVA was used to test the two null hypotheses at 0.05 level of significance. The decision rule for the null hypotheses was that any null hypothesis whose p-value was less than 0.05 level of significance was rejected and regarded as significant. Also, any null hypothesis whose p-value is equal to or greater than 0.05 level of significance was upheld and regarded as not significant. Statistical Package for Social Sciences (SPSS) software version 25 was used to carried out the analysis.

Presentation of Results and Discussion

Table 1: Mean Responses and Standard Deviation and ANOVA Analysis on the safety management practices currently adopted by the hotel industry in Asaba, Delta State

Ijeoma, M.E; Dalyopjah, R.K.; Ndubuisi, C.C.

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S/N	Safety management practices adopted by hotel	X	SD	Remarks	P-value	Remarks
1	Provision of safety management training for hotel staff	3.07	.78	Agree	.703	N.S
2	Proper maintenance of equipment and facilities	3.23	.82	Agree	.908	N.S
3	Installation of fire alarms and sprinkler systems	3.33	.79	Agree	.043	S
4	Implementation of emergency evacuation plans	2.30	1.09	Disagree	.033	S
5	Safety signage and instructions in common areas	2.29	1.08	Disagree	.029	S
6	Use of security cameras and surveillance systems	3.34	.76	Agree	.771	N.S
7	Background checks for all employees	2.30	1.08	Disagree	.021	S
8	Regular pest control and sanitation measures	2.28	1.08	Disagree	.053	S
9	Implementation of food and drinks safety protocols	2.31	1.09	Disagree	.201	NS
10	Use of secure locks and access control systems	2.92	.93	Agree	.294	NS
11	Safe handling of hazardous materials and chemicals	3.19	.83	Agree	.651	N.S
12	Proper storage of flammable substances	3.13	.80	Agree	.255	N.S
13	Safety protocols for swimming pools and recreational facilities	3.20	.77	Agree	.626	N.S
14	Regular testing and maintenance of	3.11	.83	Agree	.643	N.S

electrical systems

15	Proper bright lighting in all areas in the hotel	3.15	.79	Agree	.957	N.S
16	Providing first aid training for staff	3.01	.85	Agree	.435	N.S
17	Use of personal protective equipment for staff	3.15	.84	Agree	.248	N.S
18	Checking of luggage and vehicle of guests	3.33	.79	Agree	.003	S
19	Regular risk assessments	2.32	1.11	Disagree	.024	S
20.	The implementation of safe working practices	3.40	.67	Agree	.387	N.S
21.	The provision of emergency exit routes.	3.28	.76	Agree	.032	S
22.	Proper management of waste	3.28	.77	Agree	.752	N.S
23.	The provision of rest breaks	3.08	.81	Agree	.512	N.S
24.	The control of traffic and parking	3.22	.77	Agree	.278	N.S
Grand Mean		2.96	.87	Agree	.369	N.S

Key: Hotel Mgt. Staff No. = 75 & Grand Mean = 2.90; Hotel Employees No. = 120 & Grand Mean = 2.98; Hotel Customers No. = 106 & Grand Mean = 2.96; Total No. = 301 and Overall Grand Mean = 2.96.; Df (Degree of Freedom) = 300; N.S = Not Significant, S = Significant

The result presented in Table 1 showed the mean responses of the respondents on the safety management practices currently adopted by the hotel industry in Asaba. From the result presented above, it was revealed that 18 items among the 24 items obtained mean values above 2.50 which is the cut of point and a grand mean value of 2.96. This indicated that the respondents agree that the 81 items were the safety management practices adopted by the hotel industry in Asaba. They include: provision of safety management training for hotel staff, proper maintenance of equipment and facilities, installation of fire alarms and sprinkler systems, use of security cameras and surveillance systems, use of secure locks and access control systems, safe handling of hazardous materials and chemicals, proper storage of flammable substances, safety protocols for swimming pools and recreational facilities, regular testing and maintenance of electrical systems, proper bright lighting in all areas in the hotel, providing first aid training for

staff, use of personal protective equipment for staff among others. In addition, the corresponding standard deviation presented on the table obtained overall value of 0.87, which implied that the respondents are not far from each in their responses. The ANOVA result recorded overall p-value of 0.369 which is greater than 0.05 ($P > 0.05$). This showed that there is no significant difference among the mean responses of hotel management staff, hotel employees and hotel customers on the safety management practices adopted by the hotel industry in Asaba.

The finding aligns with Adeleke et al. (2021), who posited that many hotels in Asaba and other locations usually provide training on occupational health and safety to their employees. This training normally covers areas such as hazard identification, emergency procedures, and first aid treatment. According to Bohdanowicz (2021), continuous training for staff on safety protocols, emergency procedures, and proper handling of hazardous materials is essential. This ensures that all employees are equipped to handle emergencies effectively. The finding is also in conformity with Kwortnik (2020), who stated that many hotels in Asaba, Nigeria do establish clear emergency plans for fire, natural disasters, and other crises situation to enable the hotels respond effectively. Regular drills help staff practice these procedures. The result further strengthened (Henderson & Brooks, 2016), who stressed that majority of hotels in Asaba make use of technology for safety monitoring of the activities that go on the hotel premises. According to the author, implementation of surveillance systems and smart technology (like fire alarm systems) helps monitor safety aspects within the hotel premises. The finding also concord with Alharbi and Ali (2021), who pointed out that most hotels in Asaba usually carried out good sanitation measures and regular pest control. The authors further noted that hotels have enforced stringent health protocols, including regular sanitization of public areas and providing hand sanitizers.

Table 2: Mean Responses, Standard Deviation and ANOVA Analysis on the technology-enhanced safety management practices required for sustainable hotel operations in Asaba, Delta State.

S/N	Enhanced safety management practices that should be adopted in hotels:	X	SD	Rmks	P-value	Rmks
1	Implement a comprehensive technology-enabled safety management system	3.30	.82	Agree	.099	N.S
2	Regular training for all staff members on the use and management of safety technological tools	3.25	.79	Agree	.769	N.S

3	Installation of state-of-the-art security and surveillance systems	3.40	.76	Agree	.014	S
4	Use of advanced technology such as fire detection and suppression systems, automatic door locks, and security alarms	3.04	.90	Agree	.429	N.S
5	Regular maintenance and inspection of all facilities and infrastructure	3.09	.92	Agree	.544	N.S
6	Utilization of digital platforms and mobile apps for real-time communication	3.04	.92	Agree	.603	NS
7	Regular review and updating of safety protocols based on industry best practices	3.09	.89	Agree	.490	N.S
8	Clear communication of safety measures and procedures to guests through signage, in-room materials, and digital platforms.	3.11	.81	Agree	.065	N.S
9	Investment in innovative safety technologies such as drones, and virtual reality simulations for training and safety monitoring	3.23	.83	Agree	.694	N.S
10	Inclusion of technology-enhanced safety management as a core value and priority in the hotel's mission and vision statements	3.25	.83	Agree	.003	S
Grand Mean		3.15	.85	Agree	.406	N.S

Key: Hotel Mgt. Staff No. = 75 & Grand Mean = 3.01; Hotel Employees No. = 120 & Grand Mean = 3.20; Hotel Customers No. = 106 & Grand Mean = 3.24; Total No. = 301 and Overall Grand Mean = 3.15.; Df (Degree of Freedom) = 300; N.S = Not Significant, S = Significant

The data in Table 2 on the technology-enhanced safety management practices required for sustainable hotel operation in Asaba, Delta State indicated that all the 10 items obtained mean scores above the cut of point of 2.50; while the grand mean value of 3.15 was obtained. This indicated that the respondents agreed that all the 10 items are the technology-enhanced safety management practices required for sustainable hotel operation in Asaba. The technology-enhanced safety management practices identified include: implement a comprehensive

technology-enabled safety management system; regular training for all staff members on the use and management of safety technological tools; installation of state-of-the-art security and surveillance systems; use of advanced technology such as fire detection and suppression systems, automatic door locks, and security alarms; regular maintenance and inspection of all facilities and infrastructure; utilization of digital platforms and mobile apps for real-time communication; regular review and updating of safety protocols based on industry best practices; clear communication of safety measures and procedures to guests through signage, in-room materials, and digital platforms; investment in innovative safety technologies such as drones, and virtual reality simulations for training and safety monitoring; and inclusion of technology-enhanced safety management as a core value and priority in the hotel's mission and vision statements. Furthermore, the corresponding standard deviation presented on the table 9 recorded overall value of 0.85 which revealed that the respondents are not far from the mean and they were close to each other in their responses. The ANOVA result also indicated that 8 items were significant whereas two items (3 and 10) were not significant. However, the overall P-value of 0.406 was obtained which is higher than 0.05 ($P > 0.05$). This implied that there is no significant difference in the mean responses of hotel management staff, hotel employees and hotel customers on the technology-enhanced safety management practices required for sustainable hotel operations in Asaba.

The findings are in support of (Kwortnik & Thompson, 2021), who buttressed that conducting regular safety training for all staff members on the use of safety management technology, emergency procedures and safety protocols would enhance the safety within the hotel premise. Conducting regular safety training sessions for hotel staff can ensure that they are well-prepared to handle emergency situations and uphold safety protocols. The result is also in line with Choi (2020), who noted that the integration of advanced technology such as fire detection and suppression systems, automatic door locks, and security alarms would also improve the safety in hotel environment. Implementing advanced technology such as keyless entry systems, surveillance cameras, and electronic safety and security systems can significantly enhance safety measures in hotels (Akpan & Ibeh, 2020). The result also backs up Gupta (2021), who buttressed that regular maintenance and inspection of all facilities and infrastructure in the hotel premise is vital in ensuring safety in the hotel. Conducting regular maintenance checks on equipment, facilities, and infrastructure can help identify and address safety hazards before they escalate.

Implications of the Findings

1. The implication of this research finding to hotel operators and hospitality industries is that the findings from this study could provide a framework for developing

comprehensive technology-enhanced safety management policies that comply with legal standards and best practices in the hotel and hospitality industry. Operators would be encouraged to document policies that clearly define roles, responsibilities, and procedures to handle safety issues, which could aid in creating a safer environment and improve the hotel's reputation.

2. The implications of this findings to home economics teachers and students is that they can integrate modules on technology-enhanced safety management in hospitality settings into their curriculum. This would prepare students for real-world challenges and create awareness about the importance of technology-enhanced safety management practices in hospitality careers, aligning education with industry needs. Also, home economics students may be inspired by the findings from this study, thereby motivating them to pursue further research into specific areas of safety in domestic and hospitality environments, facilitating innovation and improvements in safety practices.

Limitations of the Study

1. The research was limited to hotels in Asaba, Delta State, which may not accurately represent safety management practices in hotels across other regions of Nigeria or different countries.
2. Responses from hotel management and staff may have been subject to bias, as participants might have had a vested interest in portraying their hotel's security measures positively.

Suggestions for Further Studies

The following suggestions were made for further research:

1. Evaluating the impact of technological innovations on hotel security and safety management practices.
2. Investigating the role of customer feedback in shaping hotel security and safety management practices.
3. Assessing the effectiveness of staff training programmes and engagement in enhancing hotel safety in hospitality industries.

Conclusion

This research underscores the importance of a proactive approach to safety that not only meets regulatory requirements but also fosters a culture of safety within the organization. By

prioritizing the well-being of guests and employees, hotels can improve their reputation, increase customer loyalty, and ultimately drive profitability. The findings from this study provide a roadmap for hotel operators in Asaba to enhance their safety management practices and ensure a secure environment for all stakeholders. The study therefore concludes that it is essential for hotel management to adopt comprehensive safety protocols, invest in staff training, and utilize technology to enhance safety measures effectively.

Recommendations

Based on the findings, the following recommendations are made:

1. Hotels should establish regular training sessions for all staff members focused on technology-enhanced safety protocols, emergency response, and customer service related to safety. This will ensure that employees are well-prepared to handle any safety-related incidents.
2. Hotels should develop a clear and detailed safety policies that address various aspects of hotel operations, including fire safety, food safety, and guest security. These policies should be regularly reviewed and updated to reflect current best practices.
3. There is need for hotels to utilize advanced technology such as surveillance cameras, electronic locks, and fire alarm systems to enhance safety measures. Regular maintenance and updates of these systems should be conducted to ensure they function effectively.

Conflict of Interest

There was no conflict of interest

Author Contributions

The study was excerpt of the author's Ph.D thesis work.

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