Crowd Control Strategies in Casinos in Lagos State, Nigeria

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Abstract - **A casino is a recreation center, one of our society's leisure amenities. Therefore, a casino is a public location where guests can play various games of chance and gambling to entertain themselves. From previous reviews as shown in the study, casinos ought to have various crowd control strategies available to avert the risks associated with overcrowding. However, it depends on how effective the designers and other building professionals are willing to implement these strategies to make the building more conducive. The study examined crowd control strategies in recreational facilities in Lagos state, Nigeria, with a view to understanding why these facilities were created for maximum profit returns, over the safety of the users. To achieve this, a structured questionnaire was used for data collection, and a descriptive approach was used to analyze the data. The findings revealed that the grand mean value of 4.57 was more significant than the cut-off mean value of 3.5, indicating that measures implemented for crowd control in the casino were ineffective. The findings imply that the crowd control strategies implemented have less effect on casino users. Thus, inadequate provision of crowd control strategies puts users at potential risk in the casinos. Casinos should provide safety measures by design from the onset or as a precaution after establishment.**

Keywords: Casinos; Crowd control; Recreational Facilities; Crowd Dynamic; Crowd Density.

I. INTRODUCTION

Recreational buildings are for passive, active, open-air, and indoor recreation. These facilities include, but are not limited to, swimming pools, tennis courts, skating rinks, auditoriums, and fitness centers (Landry, Bergstrom, Salazar & Turner, 2021). Recreational buildings often provide various amenities and services to customers and visitors. The casino recreation center is one of our society's leisure amenities. Therefore, a casino is a public location where guests can play various games of chance and gambling to entertain themselves. A standard casino has various games and entertainment to draw customers(Sharma & KB, 2021).Even though elaborate themes, musical performances, illuminated fountains, shopping centers, and sumptuous hotels help draw guests, casinos would not be in place shorn of games of chance. According to Tsai & Fong, (2021) casino operators have specific goals. These goals serve three purposes: (i) Drawing guests into the casino, (ii) keeping gamers there, and (iii) attracting repeat business. Advertising, loyalty programs, and "word-of-mouth recommendations" are examples of how the first goal might be accomplished. The second and third goals are influenced by various elements, such as the lodging type, the game types available, the winning chances, the caliber of the cuisine, the interactions between patrons and employees, and the "environment" of the casino.

Tsai & Fong, (2021)posits that "environment" might be the most challenging concept to grasp from the player's perspective. Two macro-design ideas for casinos have been put forth to produce settings that gamblers are more likely to find comfortable and where they are more inclined to spend their time and money. The first style is known as the "playground" casino design, and it aims to evoke a sense of "restoration" and relaxation by using features like moving water, greenery, and natural light (Huang, 2021; Oberdörfer et al., 2022). Contrarily, the second kind of casino design contends that successful design is predicated on directing a gambler's attention to slot machines by utilizing low ceilings, small gaming spaces, and reducing distractions. This is done so that the décor will be dominated by the machines themselves(Ho et al., 2019).

As a sequel to the required features of the casino and the users' behaviors, one of the main issues that characterized the casino was the crowd. Angitso & Eze, (2019)"Crowd" refers to a large gathering of people who may be united by a shared interest or feelings, as at sporting events and political demonstrations. According to Gong et al., (2021)The layout of a venue, the design of circulation routes, and the placement and design of facilities, among other factors, can significantly impact crowd behavior.

II. MATERIALS AND METHODS

2.1 Summary of Crowd Control Theories

Table 1: Synopsis of Crowd Theories

S/N	Proponents	Theory Descriptor	Theory Description
1	(Newburn, 2021)	Group Mind Tradition	When many people are present, people lose any feeling of self-responsibility, develop an aura of invincible strength, are vulnerable to contagion, and engage in primal behavior.
2	(Rad & Demeter, 2020)	Emergent Norm Theory	Emerging norms control how people behave in groups. It is believed that rumors and the mingling of crowds help new norms, or emergent norms, typically modifications of established norms, to arise. Although Emergent Norm Theory re-establishes the connection between an individual's understanding and a big group's actions, it cannot explain how large groups can quickly come together in unison.
3	(Porter & Rosner, 2021)	Inter-group perspective	Observing and understanding how the in-group is a group that shares certain traits and functions is crucial. Alongside more individuals from the same group) and the other, the out-group group having conflicting or unique features) are seen from various socio-cognitive angles.
4	(Hartley, 2020)	Social identity Theory	According to the theory, social influence only is possible based on shared self-categorization or a shared sense of identity.

Table 2: Synopsis of the Empirical Review

S/N	Authors	Title	Findings
1	Zeitz, Tan, Couns, and Zeitz (2017)	A review of what is now known about the psychosocial domain's psychological aspects of a crowd.	The study identified two crucial components of crowd behavior: there must be People to "seed" and participate. Recognizing these actions could present chances to alter the behavior of the crowd results.
2	Wash and Badaruddin (2019)	The location of recreational facilities and their significance as a necessary component of a livable city through qualitative comparative analysis research techniques	A constructed environment's architecture has a significant role in giving infrastructure, in particular that can stop criminal activity.
3	(MUHAMMAD, 2020)	The potential for improving building occupant safety through design knowledge and crowd behavior in emergency scenarios.	The study revealed that safety issues such as way finding, crowd flow, control, management, and communication is essential in recreational facilities.
4	Ikibe and Akande (2018)	The study evaluated the practices in passive crowd management	The findings of this study pointed out the flaws in religious building design, offered design solutions for crowd control, and made recommendations for improving

		design, focusing on crowd evacuation in big-capacity ecclesiastical structures.	design for safety and security during events and emergencies in such public spaces.
5	Keith and Marina (2020)	Examining crowd control measures for public gathering places and significant events	The study found that design, information, management, entry, circulation, and egress influenced crowd safety risk assessment. The model can be applied to enhance overall strategy planning events, spot possible crowd risks, and steer clear of crowd safety challenges.
6	(Kamarudin et al., 2022)	Examining crowd safety management methods for public gathering places and important events	According to the study, there is a significant correlation between crowd management techniques and Performance in terms of safety.

Source: Researcher's Compilation (2023)

2.2 Concept of Crowd Control

Ikibe & Akande, (2018)"Crowd control" refers to actions to maintain order among people. Nevertheless, this term does not mention the strategy or tactics used, either actively or passively, to maintain crowd control. The term "crowd control strategies" describes the techniques used to keep a throng under control. Passive crowd control design integrates architectural characteristics and ideas to manage crowds in daily and severe (emergency) conditions (Felemban et al., 2020).Santana et al., (2020)Enumerated the design variables to consider when addressing the issue of passive crowd control. The variables are the size and capacity of the building, characteristics of entrance to the building, building layout, number of routes and doors, and dimension of the routes and doors. The variables tend to control the crowd effectively if appropriately considered by the architects or the builders. Based on the nature of the casino and the activities therein, the tendency to have crowds cannot be ruled out, as many see the place as a relaxation center.

2.2.1 Crowd Dynamics

The study of human mobility, including how, when, and where groups form and move, is known as crowd dynamics. Due to interactions with the space and other people's behavior, people's behavior might be influenced by the situations in their immediate surroundings. In big settings, there could be dispersing throughout the area and crowding individuals in constrained areas. The density of the surrounding crowd influences each person's pace. It is because of individual traits and how they respond to their surroundings, their behavior may be altered to change their locomotion (Ikibe & Akande, 2018). However, people's behavior during catastrophes varies from that of regular circumstances, and the features of crowd behavior differ from those of individual behavior.

2.2.2 Crowd Density

The amount of people concentrated in a certain location is known as crowd density, which may be expressed mathematically as the number of people per unit area of a place. Crowd density is crucial for crowd movement and evacuation in severe situations. There are guidelines about the anthropometrics of people in spaces. The usual crowd density for a sitting audience is one person per square meter, citing the events management book (1 per/sqm)(Ding et al., 2020).The architects and engineers must make extrapolations regarding other elements impacting population evacuation of the area intended and maybe conduct a simulation test to determine the appropriate crowd density for a given space, which goes beyond precisely conforming to these requirements.

2.2.3 Crowd Management

The practice of regulating the actions of sizable gatherings of people for their protection and safety is known as crowd management. It is all part of planning, organizing, guiding, and evaluating tasks (Mohammed et al., 2023)The primary duty for crowd safety and security in public locations is with the organizers or operators. It needs a health and safety management system to monitor and manage crowding hazards in public spaces. (Still et al., 2020)the four interacting factors, time, place, information,

and energy, must be considered to reduce injuries and fatalities during crowd scenarios. He defined information as the opinions of those in the crowd to take collective action, time as the duration of crowding, space as the arrangement and size of the occupied area, and energy as the pressures produced by the large number of people that can result in mishaps and fatalities. In this context, crowd management considers the aspects of events involving crowds that deal with the venue, crowd size, crowd behavior, admission and exit methods, communication, jamming, and queuing. According to another observation from crowd occurrences, different crowd types react differently to disasters.

2.3 Study Area

Lagos state is located on the Bight of Benin coast in southwest Nigeria. Its borders are to the east and north by the state of Ogun, to the south by the Bight of Benin, and to the west by the Republic of Benin. The state's territory was governed by the British as part of their colony of Nigeria from 1914 to 1954. The 1954 constitution's provisions resulted in transferring the city's hinterland to the Western Nigerian administrative zone and establishing the Federal Territory of Lagos, the 27 square miles [70 square km] portion of Lagos Island that includes the city of Lagos. This arrangement, however, limited Lagos City's growth into the mainland; in 1967, the national government established Lagos State, which returned the city's autonomy over its hinterland.
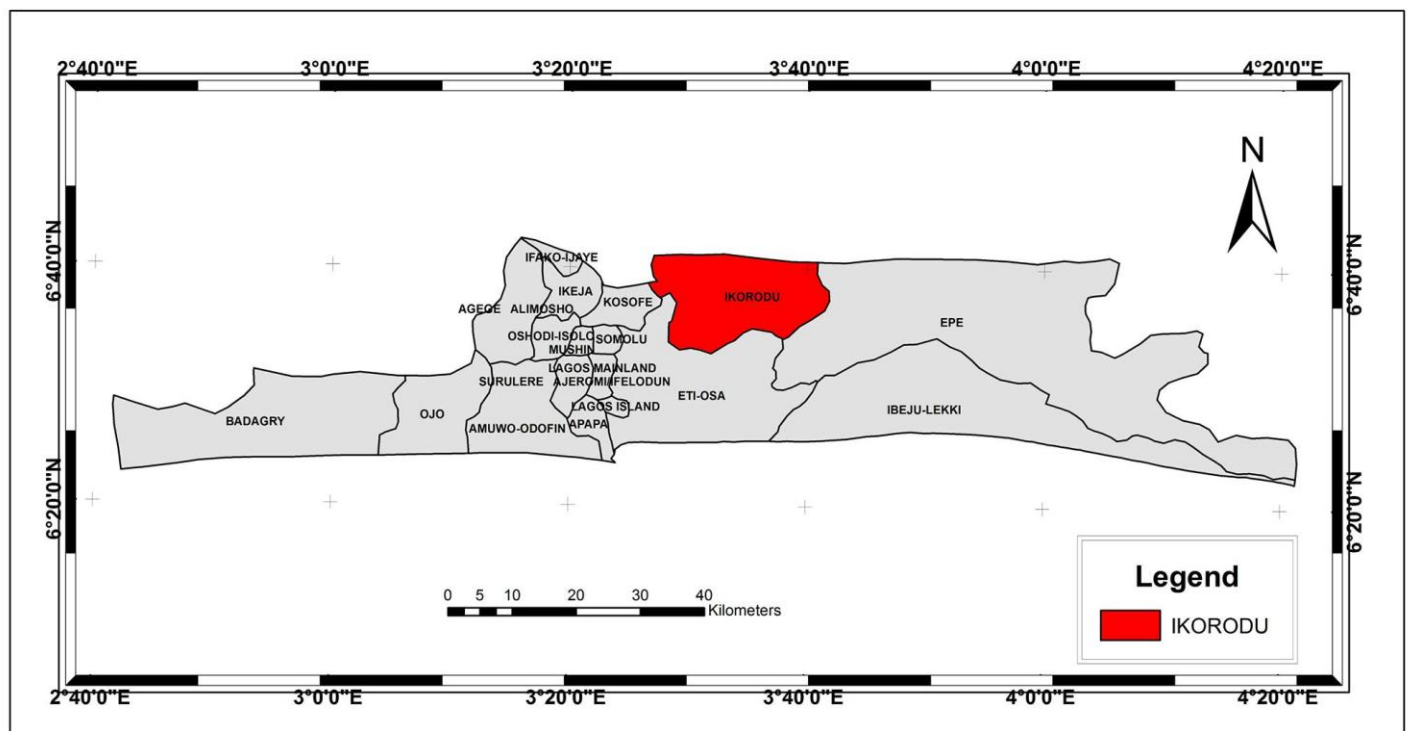

Figure 1: Administrative Map of Lagos State

Source: (Makinde & Oyelade, 2020)

2.4 Jacadara Casino, Lagos, Nigeria

Jacadara Casino is in Mobolaji Bank Anthony Way, Ikeja, Lagos. With an area of $163m2$. It was Constructed and established in 2015. It houses various facilities such as Gambling and gaming, Recreation, and Hospitality. The Casino offers an enthralling gaming experience and is in a secure location, luxurious and classy Sheraton Hotel premises the building is for the entertainment and provision of gaming activities. In terms of functional spaces, the casino has a good space, and social spaces are offered to encourage customers.
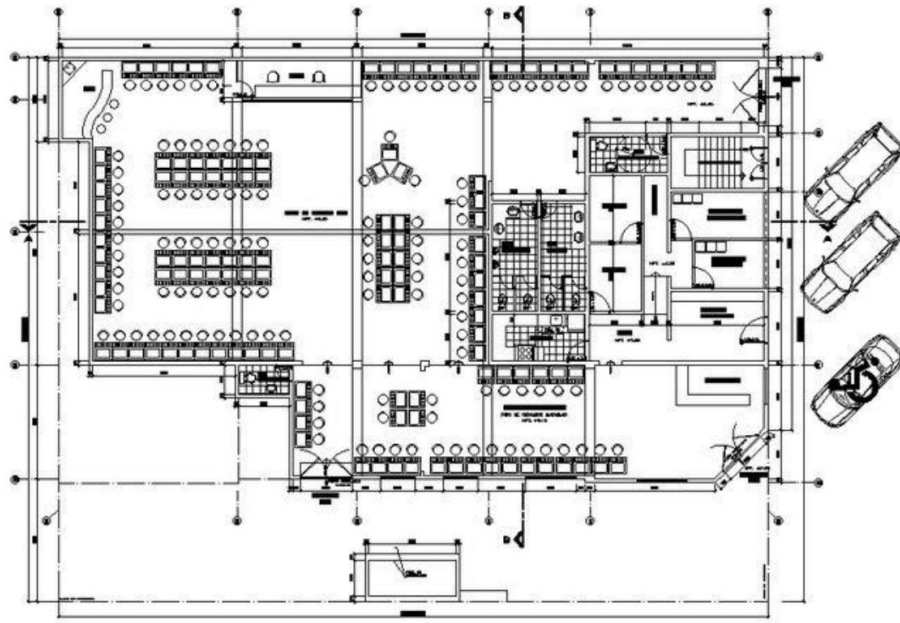
Figure 2: Plan of Jacaranda Casino

Source: Researcher's Fieldwork, (2023)

Figure 3: Approach view of Jacaranda Casino

Source: Researcher's Fieldwork, (2023)

III. RESULT AND DISCUSSION

3.1 Effectiveness of Crowd Control Strategies in Jacaranda Casino

The survey was to determine if the crowd control strategies employed in Jacaranda casinos were effective. Descriptive statistics (Mean and Standard deviation) was adopted as statistical analysis to achieve the objective. The result is shown in Table 3.

Table 3: Descriptive statistics for Effectiveness of Crowd control strategies in Casino

S/N	Variables	N	Mean	Std. Deviation
1	Venue capacity	99	4.8485	.36037
2	Spatial configuration	99	3.8384	1.13125
3	Use of Pedestrian Signage	99	4.8081	.39581
4	Entry and exiting points	99	4.3333	1.05946
5	Adequate provision of staff	99	4.1111	.71270
6	Audible alarms / directing sound systems for usersin case of emergency	99	4.8687	.33946
7	Visual alarms/directive alarm systems for physically challenged	99	4.9091	.28894
8	Provision of floor direction lighting	99	4.8990	.30288
9	Proper signage for vehicles	99	5.0000	.00000
10	Provision of parking lots	99	4.0303	.76204
	Grand Mean		**4.57**	**0.54**

Source: Researcher's Fieldwork (2023), SPSS Software (IBM, SPSS 23)

Decision Rule: The decision rule was based on a 5 -5-point Likert scale, which is.

Mean < 3.5: Disagree and Mean > 3.5 = Agree.

Table 3 depicts the descriptive statistics for the effectiveness of crowd control strategies adopted in the casino. From the analysis, the grand mean value of 4.57, more significant than the cut-off mean value of 3.5, indicates that the respondents agreed that the crowd control strategies adopted in casinos are ineffective.

3.2 User's Perception of the Crowd Control Strategies

As stated in the study model, the survey would determine the effect of crowd control strategies on casino users. A descriptive statistics method was adopted to analyze the result as shown in Table 4.

Table 4: Descriptive statistics for Crowd control strategies and the Users of Casino

S/N	Variables	N	Mean	Std. Deviation
1	The availability of crowd control strategies encourages patronage of the users	99	4.6465	.52125
2	The users of the casinos feel safe due to the types of crowd control in the casinos	99	5.0000	.00000
3	The safety of the users is paramount to the management of the casinos	99	4.8081	.39581
4	Casinos attracted a large crowd of visitors	99	5.0000	.00000
5	The crowd control strategies in the casinos are not hidden	99	4.7475	.54104
6	The control strategies influence the behavior of the users	99	4.5051	.89641
	Grand Mean		**4.78**	**0.39**

Source: Researcher's Fieldwork (2023), SPSS Software (IBM, SPSS 23)

Table 4 revealed the analysis results on the effect of crowd control strategies on casino users. All the statements have a cluster mean of 4.78 and a corresponding standard deviation of 0.39. Since the Grand mean value of 4.78 is greater than the cut-of-mean value of 3.5, it implies that the respondents agreed that the crowd control strategies have less effect on the casino users.

IV. CONCLUSION

From the findings, the study concluded as follows. First, various crowd control strategies are available in casinos to avert the risks associated with overcrowding. The crowd strategies include signage, entry and exit points' provision, audible alarms, visual alarms, floor direction, and restricted areas. However, the result shows that these strategies were not effectively used.

Furthermore, this indicated that the designers and built professionals were not safety conscious and proactive enough to incorporate various crowd control strategies. The aim of crowd control strategies is to reduce stampedes in the casino, and the users seem not to be aware of this safety information. Lastly, Casinos built in Nigeria should align with the laws and regulations governing casinos globally. As deduced from the study, comparing our local casinos with those of foreign countries shows an urgent need for improvement.

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