

Security as a Design Consideration for Shopping Mall Design in Nigeria: A Case of Lagos

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Abstract:- This study aimed at appraising the level of security as a design consideration for a commercial building design such as shopping mall. This was geared towards coming up with guidelines for ‘Designing for Security’ in Lagos state Nigeria Shopping Centers. To achieve the objectives of the study, the author adopted a survey research design method. Qualitative approach used is based on the distribution of personally administered copies of questionnaires. Lagos was chosen as the area of study for some reasons. Lagos State is a highly populated and developed state in the western region of Nigeria, which is natively a Yoruba speaking state, but due to the availability of opportunity it has become extremely diverse. The result indicates that 62% of the sample a male while 38% are females. 66% of the sample have prior knowledge of security while 34% do not. The majority of the sample believes that security knowledge is needed for the design of malls within Lagos state. At the end of the study recommendations were given to enhance better designs of shopping malls in terms of security.

Keywords:- Design; Security; Shopping mall; Commercial; Building; and Consideration.

I. INTRODUCTION

A. 1.1 Background to the study

Security is a key factor in the safety and wellbeing of the members of any society. The reassurance of the safety and security of the lives and property is a crucial part of any economy (Zelizer, 2018). To carry out business operations and other daily and recreational activities cannot be done properly without the reassurance of safety and security. security extends not just to physical components like, armed forces, checkpoints, and other notable forms of security but it also extends to the intrinsic designs and layouts of an

environment, which can consist from both the structure of the buildings to the nature of its designs. Today, society continues to dispute the appropriate role of architecture in ensuring security (Caballero-Anthony, M. , 2014). A safe system must be manageable, dependable, and useful to minimize uncertainty and unexpected behavior, resulting in improved security results. Given that human beings are still in a precarious position in terms of energy consumption, one of the primary tasks of architects is to create buildings that minimize energy use while also protecting the environment (Beccali, M., Strazzeri, V., Germanà, M. L., Melluso, V., & Galatioto, A. , 2018). Technology advances at a breakneck pace. Increasingly, buildings are becoming automated, service-oriented, and efficient. With the progress of technology, it is important to strike a balance between intelligent building elements and architectural quality, both aesthetic and practical, whose proper connection may assist in meeting user demands.

The futures of security technology will be examined to offer an evaluation of the emerging and evolving technologies that are expected to be used in asset protection over the next few decades. The intelligent building may be defined as a multidisciplinary endeavor to integrate and optimize the structure, systems, services, and administration of buildings to provide a productive, cost-effective, and environmentally friendly environment for building occupants (Danish, M. S. S., Senjyu, T., Ibrahim, A. M., Ahmadi, M., & Howlader, A. M., 2019). Intelligent buildings are about more than merely installing and running technology or advancing technology. Technology and building systems enable buildings to operate more efficiently; they enable buildings to be constructed more efficiently; they enable buildings to provide productive and healthy spaces for occupants and visitors; they enable buildings to provide a safe environment, and they enable buildings to provide an energy-efficient and sustainable

environment. As a result of the advancement in technology and structural need for security, this study draws up its problem.

B. 1.2 Problem statement

A problem can be seen as there has been a persistent increase in crime rate, unemployment, and also insecurity rate globally, the same can be said about the Nigerian economy (Adekola, P. O., ALLEN, A. A., Olawole-Isaac, A., Akanbi, M. A., & ADEWUMI, O. , 2016). Another problem can be seen as the technological innovation globally has far gone beyond what is seen in the Nigerian malls today. Therefore, the problem can be seen as an exponential increment in the crime rate accompanied by little to no innovation in the security of the shopping malls in Nigeria. This gross deficit within the tradeoff between crime rate and security innovation cannot be overlooked, both by the Active and passive security providers (Hudson, J., Lowe, S., & Kuhner, S., 2015). Without proper security and safety assurance, the activities of the shopping malls cannot be conducted with the utmost efficiency and effectiveness, The study, therefore, to contribute to solving the problem by researching in Lagos, using the shopping malls as its samples at the most recent year (2021), thereby filling the gap of time and scope.

C. 1.3 Research Question

The study draws its questions from the problem established, it aims to answer the following questions;

- i. What is the state of Lagos state located shopping malls in terms of security?
- ii. How can we use architecture to eliminate crimes in shopping malls?
- iii. What are the vulnerable crime spaces and how to use up these spaces in commercial building design?

D. 1.4 Research aims and objectives

This study aims to create designs of commercial buildings such as shopping malls whereas securing precautions of security in such buildings and how these precautions apply to Architecture, its objectives are;

- i. To Access Lagos state located shopping malls in terms of security
- ii. To use architecture in eliminating crimes in shopping malls
- iii. To identify the vulnerable crime spaces in shopping malls

E. 1.5 Significance of the study

The Study would aid the management, architects, security personnel, and other participators/stakeholders of the security of the shopping malls in Lagos and other areas by providing them with the much-needed information of security within architectural designs to enable them to make better choices and policy relating to security. It would also be significant to other future researchers by serving as a point of reference for their works.

F. 1.6 Scope of the study

The study is centered on the security within the Architectural designs of the shopping malls in Lagos state,

Nigeria. It makes use of primary data which would be gathered using a well-structured 5-point Likert scaled questionnaire. The study area would be the shopping malls within Lagos state and a best of judgment sampling technique would be used to generate the members of the sample. As per the descriptive design, the study would carry out various descriptive analyses on the generated data.

II. LITERATURE REVIEW

A. 2.1 Conceptual review

1) 2.1.1 Concept of security in architecture

A security architecture is a comprehensive security design that considers both the requirements and the hazards inherent in a particular situation or environment. Additionally, it specifies when and when security measures should be applied. Generally, the design process is repeatable (Storch, R. L., & Sukapanpotharam, S., 2002). The design principles of security architecture are stated plainly, and detailed security control specifications are generally documented in independent documents. A system architecture can be thought of as a design that encompasses a structure and addresses the connections between the structure's components (Kibert, C. J., 2016).

2) 2.1.3 Phases in the security architecture

The key phrases in the security architecture process are as follows:

- Risk Assessment of the Architecture: Assesses the business impact of critical business assets, as well as the likelihood and impact of vulnerabilities and security threats.
- Security Architecture and Design: The design and architecture of security services that support the objectives of the company in terms of risk exposure.
- Implementation: Implementation, operation, and management of security services and procedures. Assurance services are intended to guarantee that security policies and standards, security architectural decisions, and risk management are reflected in the runtime implementation of the application.
- Operations and Monitoring: Routine operations such as threat and vulnerability monitoring and threat management. In this section, steps are made to monitor and manage the operational status of the system, as well as the depth and breadth of the system's security.

3) 2.1.4 The Architect's Role in Personal Security and Safety

When an architect is guaranteeing the safety and security of their design, they focus on two main categories: the design phase and the building phase. The security of a structure is determined by the structure's nature, its location, and what needs to be guarded (Patterson, O., 2014). An architect must determine how a structure should be secured and safeguarded. While a security system protects employees or residential residents, the term "security" includes a broader range of issues, including access control, building orientation, and construction materials.

4) 2.1.5 Elements for Safe Design

1. **Balancing Open Parts and Security:** The open areas of the building must be protected, which needs an architect to examine not just entry gates, but also how the security systems will integrate with the commercial architecture's energy, telephone lines, and Internet access points. To surround the property, barriers might be included in the landscape design.
2. **Accessibility:** The design must account for all exit and access locations. Throughout the design process, access control layers are incorporated.
3. For instance, the architect must have considered the number of entrance points, such as doors and windows, and the size of these entry points that may be secured by human security patrols or electronic security systems.
4. **Orientation:** During design, it is necessary to consider the orientation of important access points. If the commercial architectural design includes a sophisticated security system, the architect must coordinate the orientation of all access restricted points with the electrical and telephone service lines.

5) 2.1.6 Elements of Safe Construction

1. **Building Materials and Techniques:** An architect must consider the building materials and their impact on security and safety in collaboration with a security expert. Certain materials, such as combustible ones, may pose a security risk if a fire occurs. Similarly, certain window and door materials are insufficient in a high-security building design.
2. **During Construction:** While the property is being built, the architect is on-site to ensure their design is being built correctly, but also to conduct security audits with security experts to identify potential issues that could be corrected during construction, thereby reducing the cost of later remodeling.
3. **Post-Construction and Occupancy Phase:** An architect must consider the security of the property once construction is complete, as well as the resident's accessibility and security.

In summary, an architect must think about the security needs of the building and its occupants, whether it is a high-security laboratory or a personal residence. Then, they must balance the numerous variables to ensure the building is safe. By implementing security and safety concerns from the start of the design, an architect can ensure a building, and its occupants and content are adequately protected from start to finish (Allen, E., & Iano, J., 2019).

6) 2.1.7 Crime Prevention Through Environmental Design (CPTED)

Crime Prevention Through Environmental Design (CPTED) is predicated on the premise that good design and use of the built environment may help reduce crime and fear of crime (Cozens, P. M., 2002). This increases the overall quality of life. In contrast to the traditional approach of addressing crime concerns through the implementation of visually obtrusive security or target hardening measures

such as locks, hard barriers, security gates, and security patrols, CPTED advocates for high-quality and visually appealing solutions as initial responses that aim to enhance the legitimate use of space. CPTED may be administered without impairing the space's usual use. It is simple to apply and may be quite cost-effective, particularly if done early in the planning and design stages of a project.

The four principles of CPTED are:

- Natural surveillance
- Natural access control
- Territorial reinforcement
- Maintenance and management

The four CPTED concepts have significant overlaps and synergies. These have been separated for ease of reference and comprehension. In practice, it may be advantageous to see these four concepts as distinct features of a single strategy for dealing with physical environment security. About the first two principles, the term 'natural' refers to the process of obtaining surveillance and access control outcomes as a by-product of regular and routine environmental usage (Ekblom, P., 2011).

7) 2.1.8 Surveillance of The Natural World

The underlying idea is that criminals despise being monitored. Surveillance, or the presence of genuine 'eyes on the street,' raises criminals' perceived danger. This may also raise the real risk to offenders if people monitoring is prepared to intervene when potentially dangerous situations arise. Thus, surveillance's primary objective is not to keep intruders out (although it may have that effect), but to keep them under watch. Natural monitoring may be accomplished in a variety of ways. The flow of activities can be redirected to concentrate more individuals (observers) close to a possible crime scene. Improved sightlines from within buildings may be achieved by the placement of windows, illumination, and the elimination of obstacles.

8) 2.1.9 Control of Natural Access

Natural access control entails the use of doors, fences, bushes, and other physical factors to keep unauthorized individuals out of a certain location if they do not have a genuine cause to be there. At its most basic level, access control may be accomplished in private residences or business enterprises through the use of appropriate locks, doors, and window barriers. However, as one advances beyond private property into public or semi-public settings, access restriction must be applied with greater caution. Entrances, exits, fences, landscaping, and lighting that are strategically placed can gently guide both pedestrian and vehicular traffic in ways that reduce criminal chances.

Access control can be as straightforward as determining the location of a front office concerning a warehouse. While access management is more challenging on streets and places that are completely exposed to the public, there are alternative approaches available in these situations. For instance, access control can be accomplished through the use of non-physical or 'psychological' barriers. These barriers might take the shape of signage, pavement textures, nature strips, or anything else that communicates an

area's integrity and individuality. A psychological barrier is based on the premise that if a target appears odd or challenging, it may also be undesirable to would-be offenders (Kazemian, L., & Travis, J., 2015). Because any technique that promotes access control is likely to obstruct mobility, access control tactics should be carefully considered. While such methods may reduce the likelihood of crime, they should not impair the mobility of prospective victims.

a) 2.1.10 Reinforcement of The Territorial

People are innately protective of their perceived area and have a certain regard for the territory of others. Establishing distinct borders between public and private spaces through the use of physical features such as fences, pavement treatment, art, signage, proper upkeep, and landscaping are all methods to demonstrate ownership. In such well-defined regions, identifying intruders is considerably easier. Territorial reinforcement is demonstrated to be effective when space's legibility, transparency, and directness dissuade prospective offenders due to users' familiarity with one another and their surroundings (Kazemian, L., & Travis, J., 2015).

b) 2.1.11 Management and Maintenance

This relates to the neighborhood's feeling of 'place pride' and territorial defense. A decrepit location is more prone to attract undesirable activities (Merwood-Salisbury, J., 2019). The upkeep and 'image' of a place can have a significant influence on whether it becomes targeted. Additionally, territorial concern, social cohesiveness, and a general sense of security may be bolstered via the creation of a community's identity and image. This method has the potential to improve not just the population's perception of itself and its domain, but also the projection of that perception to others. With precise spatial definitions, such as subdividing space into various degrees of public/ semi-public/ private sectors and establishing norms and expectations, the amount of social alienation would diminish. This has been linked to a decrease in the opportunity for deviant or illegal behavior, such as vandalism.

Maintenance and management should be considered during the design phase, as the materials and finishes were chosen to affect the types of maintenance regimes that can be sustained over time. For instance, plant material should be chosen according to its mature size to prevent obstructing sightlines.

c) 2.1.13 Passive Security vs. Active Security

In general terms, passive security in architecture is "a design element that deters attacks while staying mostly unseen to its users." Passive security is also mostly product-less; rather than existing as goods to be specified, passive security is about using excellent design to offer an additional layer of privacy, security, and protection (Ahson, S. A., & Ilyas, M., 2017). Active security is more apparent and consistent with what the majority of people consider to be traditional security. Spiked gates, high fences, barbed wire, metal detectors, surveillance cameras, and armed security

patrols are all examples. All of these security measures provide an external signal of hostility, and many of them will require continuous maintenance. Active security's proclivity for intimidation is the reason for the passive security movement. Active security may frighten or intimidate the community's residents and visitors. According to studies, when innocent individuals encounter equipment designed to protect them, they feel less secure and have heightened terror emotions (Levine, A. J., 2020).

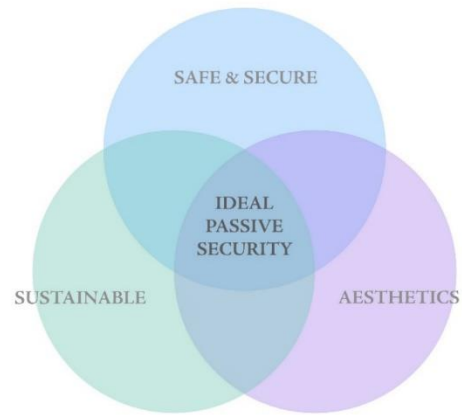


Figure 1: Passive vs active security
Source: Google

d) 2.1.14 Spaces and Activities

The major spaces and activities that occur in a shopping mall can be formulated as:

Table 1: Distribution of spaces

	SPACES.	ACTIVITIES	
PUBLIC ZONE	Food court	Leisure	
	Book store	Leisure	Shopping
RETAIL	Theater		Shopping
	Stores		Shopping
PARKING	Kiosk		
	Shops		Managem ent
	Basement		Managem ent
SERVICES	Open Elevators		
	Escalators	Transportation	
	Staircases	Transportation	
	Corridors	Transportation	

Author's field work 2021

Vertical distribution

Public zones are placed above to increase exposure through retail zones

Horizontal distribution:

Retail spaces are intended to place around the public zone to increase shop value and its exposure to the public spaces

Circulation:**2.1.15 An Overview on The Intersection of Safety and Architecture in shopping malls**

The concept of the topic to be reviewed deals with how one can apply safety measures and considerations in shopping malls with an Architectural mindset.

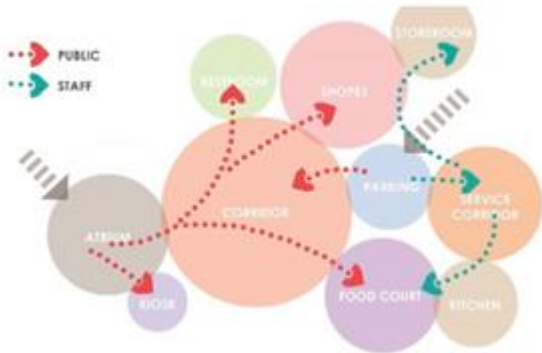


Figure 2: Circulation
Source: Google

They are a lot of criminal activities that take place in commercial buildings especially shopping malls e.g.:

- Shoplifting: is a common crime committed against retail businesses. It involves stock being stolen by a thief posing as a customer. It may be committed by individuals or organized groups.
- Money fraud is when criminals use an illegal method to pay for goods. This may include counterfeit cash, stolen credit cards, or fraudulent cheques.
- Checkout fraud includes several tactics where criminals avoid paying in full for goods when paying at the tills. Examples include swapping barcodes or price stickers for a less expensive item or deliberately failing to swipe a product at a self-checkout.
- Refund fraud is another crime that can happen at the till. It can take the form of an offender attempting to return a stolen item in exchange for money or credit, or falsifying receipts.
- Burglary can be committed against retail stores, usually when the shop is closed. These 'smash and grab' crimes involve forcing entry and stealing merchandise.
- Abuse can be aggressive or violent behavior of customers towards shop workers.
- Vandalism is also a risk for retail businesses. It could include graffiti, smashed windows, or damaged signs.

2.1.16 Effectiveness of Passive Design Features and Active Installation for Security in Large Shopping Centers

Nigerians have been seeing a battle of the classes as developers and investors compete to create the greatest shopping malls.

However, some of these shopping centers are exploited by a small number of patrons who utilize the pretext of shopping to indulge in certain immoral and illegal behaviors. Not only has the shopping center business model increased the country's gross domestic product (GDP) and produced jobs, but it has also offered recreational and leisure areas for

people with the financial means to use them. A significant problem is that the design and security planning phases of the majority of these retail centers appear to be operating independently of one another, rather than cooperating to produce a completely protected facility. His research studies the influence of passive design characteristics on the installation of active security in big retail centers. To accomplish the aims, data were gathered from primary and secondary sources using organized observation schedules and questionnaires. A total of 240 questionnaires were given via a stratified sample technique to security officers at 30 chosen retail centers. The data were analyzed using descriptive statistics. The results demonstrated the efficacy of currently available passive design features in the installation of security components. It is suggested that retail centers designed with passive design principles extend to the provision of optimum security (Engberg, S. J., Harning, M. B., & Jensen, C. D., 2004)

Safety Perceptions at a Shopping Center

The impression of a shopping mall's safety is critical for companies. If a consumer believes that a shopping center (or at least portions of it) is unsafe, she or he will avoid it and seek another that meets this basic need—safety.

In general, shopping malls are regarded to be safer than town centers (Ceccato, V., & Tcacencu, S., 2018), owing to their hermetic architecture and compartmentalized functions such as retail, restaurants, entertainment, and parking lots. Visitors' views of a shopping center's safety are influenced by a variety of overlapping variables, including the customers' characteristics, the facility's safety conditions, the mall's surroundings, and surrounding regions' quality and upkeep, and the security system in place. Individual characteristics such as age, gender, location of residence, frequency of usage of the site, and prior crime victimization are frequently cited in the international literature as examples of how individual aspects impact stated perceived safety.

Individuals who have been victims of crime are frequently more scared than those who have never been a victim. Women are scared to a greater extent than males. People over the age of 65 express higher fear than younger adults. People feel safer when they are familiar with their environment (Bromley, R. D., & Stacey, R. J., 2012). Newcomers (or incomers) may instill fear in individuals, and people may express concern for their family and friends, a phenomenon is known as 'altruistic terror.' Additionally, perceived safety can be impacted by other, multi-scale variables (national, global) that have an impact on individuals' everyday life, such as the media. Individuals' perceived safety is also affected by their knowledge (or impression) that a specific location is criminogenic.

Savard and Kennedy examined a variety of research on crime victimization in shopping malls and concluded that reported crime victimization was significantly less than visitors' fear of crime. Yet shopping malls are viewed as hazardous establishments because they attract thousands of daily consumers who bring big sums of cash and credit cards

and then leave with costly merchandise, making them a magnet for criminals (Bromley, R. D., & Stacey, R. J., 2012).

In other words, the sorts of activities offered by shopping malls are inevitably going to generate unique circumstances for crime in some locations and at certain times. In a shopping mall, customers demonstrate functional dread by attempting to avert something awful from happening' by taking steps that make them feel safer. In this instance, consumers avoid specific areas of the shopping mall and/or certain times of the day. Additionally, retail centers are not self-contained within the urban environment. Thus, the location and reputation of a shopping mall are critical for all visitors, as shopping centers might result in a high number of criminal events due to their setting. Shopping malls, for example, are connected to transit hubs, which are critical for the formation of people's routines.

e) 2.1.17 Security at shopping malls

Collins prosper was established to conduct exploratory work on local level security and business crime rates, to develop insights, and to raise awareness about security and crime risks at the office/retail shopping malls in Harare, Zimbabwe, using the methodology and practice of a "premises survey" conducted at Joina City Mall as a case study (June 2011–July 2012). This is to suggest that while no one variable can guarantee the intended outcome, depending on the risks, multiple variables can work in concert to provide even better outcomes.

For instance, in this situation, to contribute to the creation of a safer shopping environment and the expansion of companies in town/city malls. At Shopping Centers, There Are Crimes and Security Liability Concerns According to Dennis Havard, crime may be a problem at major retail malls. Governing by way of corporate security. He then discussed the common components and nature of security efforts, the nature and locations of crime, and the liability issues that arise when shopping centers are involved. Finally, he considered potential directions for corporate security in shopping centers in the future.

f) 2.1.18 Integrating Design and Security

The twentieth-century tenet of "form follows function" According to architecture, design criteria should be determined by the unique functional requirements of a structure. A structure must allow for effective work performance, fulfill the user's demands, and safeguard the user against safety dangers and illegal activities. In reality, however, this precept is frequently violated when the design is primarily concerned with form rather than function. Aesthetics, material choices, and compatibility with the surrounding environment have taken precedence over the activities intended within the structure. Throughout history, humans have attempted to exert control over their physical surroundings. The development of new cities and the extension of existing big cities, the continued industrialization of labor, and an increase in lawlessness have increased interest in crime prevention mechanisms that work at the most fundamental levels of social life in the

twenty-first century. CPTED is a term that refers to the notion of crime prevention through environmental design.

Architects are concerned about security experts' fortress mindset, while security professionals are concerned about architects' inability to include security features into the design of buildings from the bottom up (Harbour, J. L., 2019). The dispute is not over whether to incorporate security technology into the design of the structure; rather, the tension is between the openness of the facility on the one hand and appropriate access control on the other. Securing a structure that was not meant to be secure is a costly undertaking. Architects must compromise a greater proportion of a building's openness when retrofitting for security than if the structure were planned for security from the start. Protection and running costs are more than necessary as a result of a lack of foresight during the facility's construction. This issue is particularly pronounced in many of today's buildings, where modern design and materials can result in extremely susceptible facilities and infrastructure.

III. METHODOLOGY

A. 3.1 Area of the study

For the purpose of the study, the area of consideration would be Lagos State, Nigerian. Lagos State is a highly populated and developed state in the western region of Nigeria, which is natively a Yoruba speaking state, but due to the availability of opportunity it has become extremely diverse. It is home to a vast number of social hubs ranging from parks to shopping malls both private and public. which is the major reason for its selection as a result of the high level of available observations.

B. 3.2 Research Design

The main aim of this study is to assess the Design consideration for Security in the shopping malls in Lagos, Nigeria. To achieve this objective, this study intends to adopt a survey research design method. This quantitative approach will be based on the distribution of personally administered copies of questionnaires. This will allow respondents to have ample time to complete the questionnaire and making it easier and more convenient for them to respond.

C. 3.3 population of the study

The target population for this study will be professionally trained architects. The population of the study will consist of the individuals involved or have knowledge in the designing of shopping complexes in Lagos.

D. 3.6 Source of data collection

The study would make use of primary data as its major source. The data would be collected with the use of a well-structured questionnaire. The questionnaire would be administered to the selected architects that make up the sample. The questionnaire would be based on the 5- point Likert-style rating scale. The data collected would then be analyzed.

E. 3.7 Method of analysis

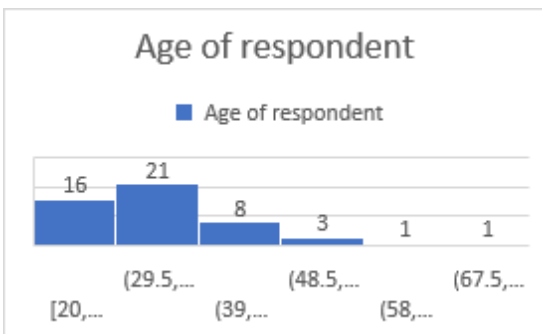
The research would make use of a combination of descriptive and inferential analysis to generate the result which would serve as a bases for the conclusion of the study. The selected analysis is a result of the nature of the data collected, the analysis includes; Descriptive statistics such as mean, median, modes, pie and bar charts would be carried out to describe the observations and a regression analysis would be carried out to test both the relationship which exist within the variables.

IV. DATA ANALYSIS AND INTERPRETATION

A. 4.1 Preamble

This section would provide the various results of the study and its interpretation, which would serve as the basis of the conclusion of the study.

B. 4.2 Age of the respondent



The chart shows that the majority of the sample is within the age of 20-30, but the questionnaire has represented like 1 of each group.

C. 4.3 Gender of the respondent

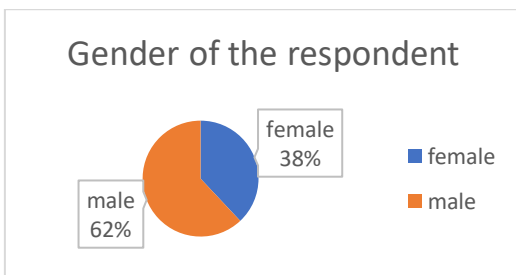


Table 2: Gender

Gender of the respondent	frequency	Percentage
female	19	38%
male	31	62%
Total	50	100

The result indicates that 62% of the sample a male while 38% are females.

D. 4.4 Possession of security knowledge

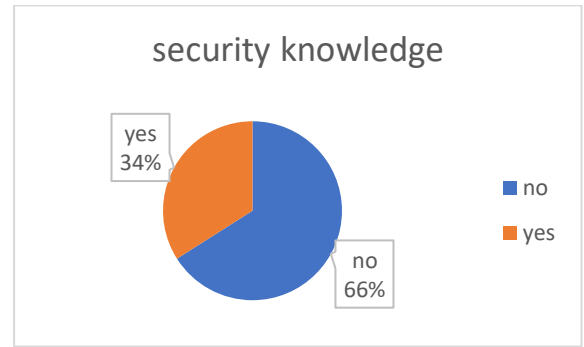


Table 3: possession of security knowledge

prior security knowledge	frequency	Percentage
no	33	66%
yes	17	34%
Total	50	100

The response indicates that 66% of the sample have prior knowledge of security while 34% do not.

E. 4.5 Years of experience

security knowledge is not needed	security knowledge is not needed	Percentage
agree	7	14%
disagree	8	16%
strongly agree	16	32%
strongly disagree	12	24%
undecided	7	14%
Total	50	100



The graph indicates that the sample possesses a fair number of years within the field to answer the survey.

F. 4.6 Prerequisite of field knowledge

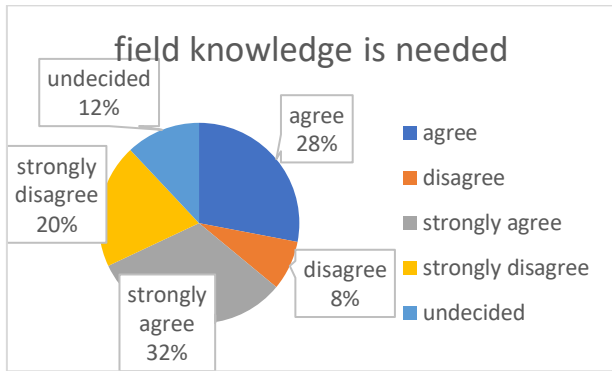


Table 4: Prerequisite of field knowledge

prior field knowledge is needed	prior field knowledge is needed	percentage
agree	14	28%
disagree	4	8%
strongly agree	16	20%
strongly disagree	10	32%
undecided	6	12%
Total	50	100

The results indicate that majority of the sample strongly disagrees with the prior requirement of knowledge for security designs within Lagos state malls.

G. 4.7 irrelevance of prior security knowledge

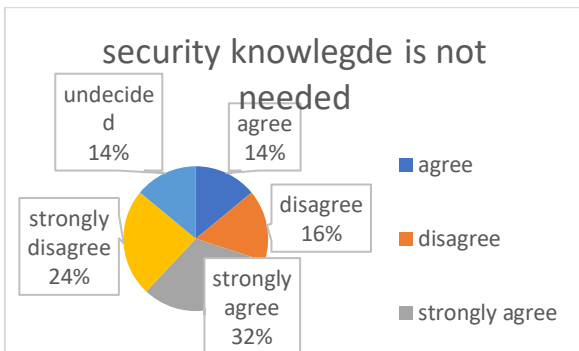


Table 5: Irrelevant of prior security knowledge

From the results, the majority of the sample believes that security knowledge is not needed for the design of malls within Lagos state.

H. 4.8 Specialist information usage

Designs limited by funds	Count of Designs limited by funds	Percentage
agree	12	24%
strongly agree	22	44%
strongly disagree	10	20%
undecided	6	12%
Total	50	100

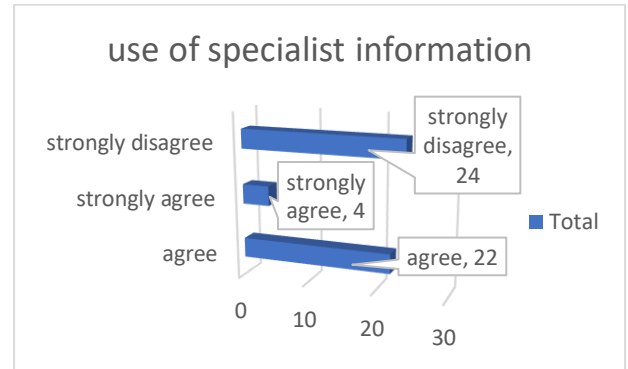


Table 6: Specialist information

Use of specialist information	Use of specialist information	Percentage
agree	22	44%
strongly agree	4	8%
strongly disagree	24	48%
Total	50	100

The results indicate that majority of the sample believes that the use of specialist-provided information is essential for the security designs.

I. 4.9 Limitation of funds

mall size limits the design	Count of mall size limits the design	Percentage
agree	13	26%
disagree	7	14%
strongly agree	13	26%
strongly disagree	16	32%
undecided	1	2%
Total	50	100

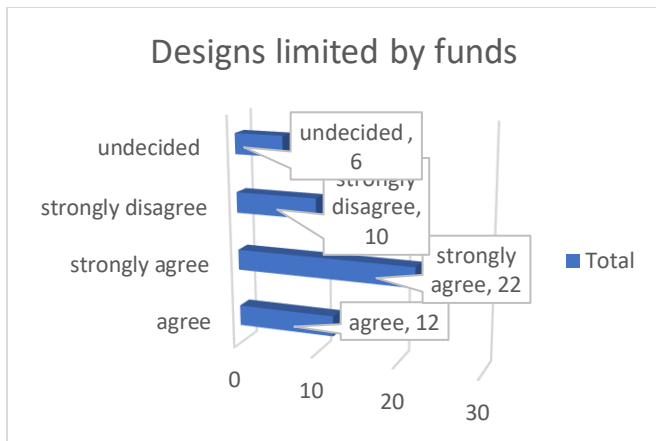
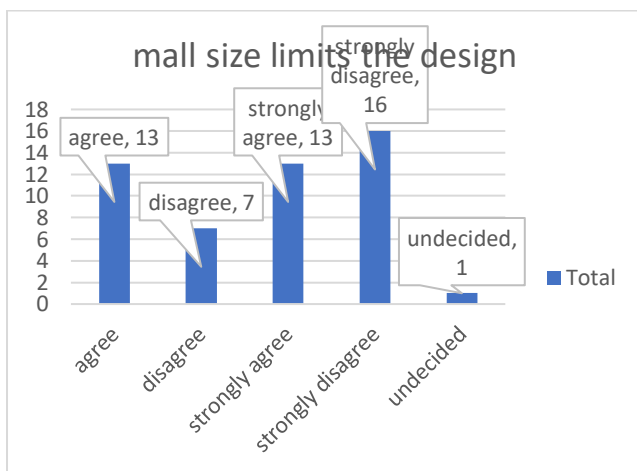


Table 7: Limitation of funds

The chart shows that most of the sample 64% see the funds of the available funds allocated for the project as a limiting factor

1) 4.10 Limitation by landmass



The results show that there is a high at least half of the sample believes that the landmass of the mall can pose a limitation on the security design

2) 4.11 Specialist information

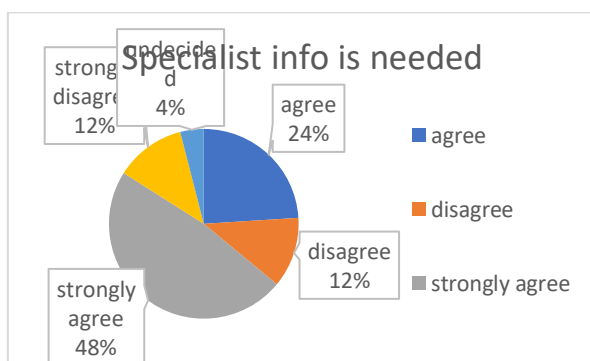


Table 8: Specialist info

Specialist info is needed	Specialist info is needed	Percentage
agree	12	24%
disagree	6	12%
strongly agree	24	48%
strongly disagree	6	12%
undecided	2	4%
Total	50	100

The result indicates the gross majority of 70% would recommend the use of a security specialist as a consultant to provide necessary information when designing for the security of malls in Lagos state.

V. SUMMARY, CONCLUSION AND RECOMMENDATION

A. 5.1 Summary

The study focused on design consideration for security: a quest for the confluence of safety and architecture in retail mall in Lagos. Security measures are essential to protect the people, furniture, equipment, and materials. Security is one of the essential aspects when it comes to commercial buildings like shopping malls, to prevent theft and other criminal activities. Also prevent loss in the business of these commercial companies. This research serves to remove any kind of suspicious or bad actions that take place in such places and how the sense of Architecture may apply to these measures.

B. 5.3 Conclusion

The study therefore concludes that Security within the architectural design of malls in Lagos is a significant factor which should be considered in the setting up of the structures, as such the need to improve on the level of security within designs cannot be overemphasized.

C. 5.4 Recommendations

The study recommends the following;

- i. The need for security knowledge should be a requirement in security design.
- ii. The input and recommendations of the architect should greatly be recognized.
- iii. Proper funding should be given when designing the malls.
- iv. the architects should be given the most accurate information at the point of commissioning
- v. The malls in Lagos should carry out routine security drills to ensure the ability of the designs to adequately detect and combat security threats.
- vi. A complete revamp of the security protocols and shuffling of personnel should be done periodically.
- vii. Further research should be done on the topic to provide better understanding on the topic.

REFERENCES

- [1]. Adekola, P. O., ALLEN, A. A., Olawole-Isaac, A., Akanbi, M. A., & ADEWUMI, O. . (2016). Unemployment in Nigeria; A Challenge of Demographic Change?. *International Journal of Scientific Research in Multidisciplinary Studies ISROSET*, 1-9.
- [2]. Ahson, S. A., & Ilyas, M. (2017). *RFID handbook: applications, technology, security, and privacy*. . Florida: CRC press.
- [3]. Allen, E., & Iano, J. (2019). *Fundamentals of building construction: materials and methods*. . UK: John Wiley & Sons.
- [4]. Beccali, M., Strazzeri, V., Germanà, M. L., Melluso, V., & Galatioto, A. . (2018). Vernacular and bioclimatic architecture and indoor thermal comfort implications in hot-humid climates: An overview. . *Renewable and Sustainable Energy Reviews*, 1726-1736.
- [5]. Bromley, R. D., & Stacey, R. J. (2012). Feeling unsafe in urban areas: exploring older children's geographies of fear. . *Environment and Planning*, 428-444.
- [6]. Caballero-Anthony, M. . (2014). Understanding ASEAN's centrality: bases and prospects in an evolving regional architecture. . *The Pacific Review*, 563-584.
- [7]. Ceccato, V., & Tcacencu, S. (2018). Perceived safety in a shopping centre: a Swedish case study. *In Retail crime. Palgrave Macmillan, Cham*, 215-242.
- [8]. Cozens, P. M. (2002). Sustainable urban development and crime prevention through environmental design for the British city. *Cities*, 129-137.
- [9]. Danish, M. S. S., Senjyu, T., Ibrahim, A. M., Ahmadi, M., & Howlader, A. M. (2019). A managed framework for energy-efficient building. *Journal of Building Engineering*, 120-128.
- [10]. Ekblom, P. (2011). Deconstructing CPTED and reconstructing it for practice, knowledge management and research. *European Journal on Criminal Policy and Research* , 7-28.
- [11]. Engberg, S. J., Harning, M. B., & Jensen, C. D. (2004). Zero-knowledge Device Authentication: Privacy & Security Enhanced RFID preserving Business Value and Consumer Convenience. *PST* , 89-101.
- [12]. Harbour, J. L. (2019). *21st century security and CPTED: Designing for critical infrastructure protection and crime prevention*. . Florida: CRC Press.
- [13]. Hudson, J., Lowe, S., & Kuhner, S. (2015). *The short guide to social policy*. Bristol: Policy Press.
- [14]. Kazemian, L., & Travis, J. (2015). Imperative for inclusion of long termers and lifers in research and policy. . *Criminology & Public Policy*, 355-395.
- [15]. Kibert, C. J. (2016). *Sustainable construction: green building design and delivery*. UK: John Wiley & Sons.
- [16]. Levine, A. J. (2020). *Sermon on the Mount: A Beginner's Guide to the Kingdom of Heaven*. Nashville: Abingdon Press.
- [17]. Merwood-Salisbury, J. (2019). *Renewal, Revitalization, and Place Making*. Chcago: University of Chicago Press.
- [18]. Patterson, O. (2014). Making sense of culture. *Annual Review of Sociology*, 1-30.
- [19]. Storch, R. L., & Sukapanpotharam, S. (2002). Development of repeatable interim products utilizing the common generic block concept. *Journal of ship production*, 195-202.
- [20]. Zelizer, V. A. (2018). *Morals and markets*. Columbia: Columbia University Press.