

Assessment of Building Finishing, Maintenance Practices and Building Performance in Aba, Nigeria

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ABSTRACT

This study assessed building finishing, maintenance practices, and building performance in Aba, Abia State, Nigeria. The study adopted a cross-sectional survey research design involving 134 building owners, contractors, and maintenance personnel selected through simple random sampling. Data were collected using a structured questionnaire and analyzed using descriptive statistics and multiple regression analysis with the aid of SPSS Version 27. The findings revealed that wall cracks, roof leakages, faulty plumbing fixtures, electrical faults, and poor ventilation were the most common defects affecting buildings in the study area, indicating deterioration in the condition of building finishes. Maintenance practices were generally perceived to be moderately effective, although corrective maintenance was more frequently adopted than preventive maintenance. The regression analysis further revealed that both maintenance practices ($\beta = 0.401$, $p < 0.001$) and building finishing ($\beta = 0.305$, $p = 0.001$) had significant positive effects on building performance. The model explained 60.1% of the variation in building performance ($R^2 = 0.601$; $F = 37.123$; $p < 0.001$), indicating that improvements in building finishing and maintenance practices contribute significantly to enhanced building performance. The study concludes that adopting preventive maintenance strategies, using quality finishing materials, and strengthening maintenance management practices are essential for improving the durability, functionality, and sustainability of buildings in Aba. The study recommends that property owners, facility managers, and government regulatory agencies prioritize preventive maintenance programmes, enforce building maintenance standards, and promote the use of durable finishing materials to enhance building performance and ensure sustainable urban development.

Keywords: Building finishing, building maintenance, building repairs, building construction, finishing quality, building defects.

INTRODUCTION

Buildings are essential components of the built environment, providing spaces for residential, commercial, institutional, industrial, and recreational activities. Beyond serving as shelter, buildings contribute significantly to economic growth, social development, and the overall quality of life. The ability of a building to effectively perform its intended functions throughout its lifespan depends largely on the quality of construction, building finishing, and maintenance practices adopted after construction. Building finishing and maintenance are therefore critical factors in determining the durability, functionality, safety, aesthetics, and overall performance of buildings (Douglas, 2021; Olanrewaju and Abdul-Aziz, 2015). Building finishing constitutes the final stage of the construction process and involves the installation or application of materials and components that enhance both the appearance and functionality of a building. These include plastering, painting, floor and wall finishes, roofing materials, ceiling systems, doors, windows, plumbing fixtures, and electrical fittings. In addition to improving aesthetics, building finishes provide protection against environmental factors such as moisture, heat, rainfall, and corrosion, thereby contributing to the

durability and serviceability of building components (Chudley and Greeno, 2020). The quality of finishing materials and workmanship directly influences the long-term performance of buildings, as poor finishes often result in rapid deterioration, increased maintenance requirements, and reduced occupant satisfaction.

Building performance refers to the extent to which a building successfully fulfils its intended functions while meeting users' expectations regarding safety, comfort, functionality, durability, and aesthetics. A high-performing building provides a safe and comfortable environment, maintains its structural integrity, and remains functional throughout its service life. Conversely, poor building performance is often manifested through defects such as dampness, peeling paint, wall cracks, leaking roofs, defective plumbing systems, damaged floor finishes, and deterioration of building components. Such defects not only reduce the value and functionality of buildings but also increase maintenance costs and compromise occupants' well-being (Lützendorf and Balouktsi, 2017).

Building maintenance plays a vital role in preserving building performance by ensuring that building elements continue to

function as intended. Maintenance encompasses all technical and managerial activities undertaken to retain, restore, or improve the condition of a building and its components. Effective maintenance practices help prevent premature deterioration, extend the service life of buildings, reduce life-cycle costs, and maintain the value of property assets (Seeley, 2019). However, where maintenance is neglected or poorly managed, defects accumulate over time, resulting in accelerated deterioration and declining building performance. Globally, increasing attention has been given to sustainable building management as governments, property owners, and construction professionals seek to maximize the useful life of buildings while minimizing maintenance costs and environmental impacts. This has led to greater emphasis on preventive maintenance, regular inspections, quality finishing materials, and effective facility management practices as strategies for improving building performance and sustainability (ISO, 2018). In many developing countries, however, challenges such as inadequate maintenance culture, poor workmanship, financial constraints, weak regulatory enforcement, and the use of substandard construction materials continue to hinder effective building maintenance and management (Lateef, 2020).

In Nigeria, rapid urbanization and population growth have increased the demand for residential, commercial, and institutional buildings. Despite the expansion of construction activities, many buildings experience defects and deterioration shortly after completion. Studies have attributed these problems to poor-quality finishing materials, inadequate workmanship, lack of routine maintenance, and ineffective maintenance management practices (Windapo and Rotimi, 2012; Olanrewaju and Abdul-Aziz, 2015). Consequently, many buildings suffer from reduced durability, increased maintenance costs, and declining performance.

Aba, one of the major commercial centres in southeastern Nigeria, has experienced considerable urban growth and physical development in recent years. The increasing demand for residential and commercial buildings has stimulated construction activities across the city (Abia State Government, 2022). However, many buildings within Aba exhibit visible signs of deterioration, including peeling paint, cracked walls, dampness, leaking roofs, deteriorated ceilings, damaged floor finishes, and poorly maintained external environments (Okorie and Ogunlana, 2022). These problems are often exacerbated by the city's humid tropical climate, characterized by high rainfall and humidity levels, which accelerate the deterioration of building finishes and components where maintenance is inadequate.

Although previous studies have examined building maintenance, construction quality, and building defects in different parts of Nigeria, limited attention has been given to the relationship among building finishing, maintenance practices, and building performance in Aba. Most existing studies have focused on larger urban centres, leaving a gap in knowledge regarding the factors influencing building performance within the unique environmental and socio-economic context of Aba (Douglas, 2021; Windapo and Rotimi, 2012). Understanding how building finishing and maintenance practices affect building performance is essential for improving the durability, functionality, and sustainability of buildings in the city. This study therefore seeks to assess building finishing, maintenance practices, and building performance in Aba, Nigeria, with a view to providing empirical evidence that can support improved building management and sustainable development. The study specifically aims to: assess the condition of exterior and interior building finishing in selected

buildings in Aba; examine the maintenance practices adopted for buildings in Aba; evaluate the level of building performance in selected buildings; determine the influence of building finishing on building performance; and examine the influence of maintenance practices on building performance.

The findings of this study will provide valuable information to property owners, architects, builders, engineers, facility managers, and maintenance professionals on the importance of quality building finishing and effective maintenance practices in enhancing building performance. The study will also provide evidence that can support the development of policies, regulations, and maintenance guidelines aimed at improving the quality and sustainability of the built environment in Aba and other urban centres in Nigeria.

This study focuses on the assessment of building finishing, maintenance practices, and building performance in selected residential and commercial buildings in Aba, Abia State, Nigeria. The study examines the condition of exterior and interior building finishes, evaluates maintenance practices adopted by building owners and managers, and assesses their influence on building performance. Other factors that may affect building performance but fall outside the selected variables are not considered within the scope of this study.

LITERATURE REVIEW

Theoretical Review

This study is anchored on the Theory of Planned Behaviour (TPB) and Maintenance Management Theory (MMT) because both theories explain the behavioural and managerial factors influencing building maintenance and, ultimately, building performance. The Theory of Planned Behaviour, developed by Ajzen (1991), posits that an individual's behaviour is determined by behavioural intentions, which are influenced by three factors: attitude toward the behaviour, subjective norms, and perceived behavioural control. In building maintenance, the theory suggests that property owners, facility managers, and maintenance personnel are more likely to adopt effective maintenance practices when they perceive maintenance as beneficial, receive social or professional support, and possess the necessary resources and skills to carry out maintenance activities. Consequently, maintenance behaviour significantly influences the condition and long-term performance of buildings.

The Maintenance Management Theory emphasizes that building maintenance should be systematic, planned, and preventive rather than reactive. According to Mills (2011), effective maintenance management involves regular inspections, timely repairs, proper allocation of maintenance resources, and continuous monitoring of building components to ensure that buildings remain functional throughout their service life. The theory argues that preventive maintenance minimizes deterioration, reduces maintenance costs, prolongs building lifespan, and improves building performance. This theory is particularly relevant to the present study because it provides a framework for understanding how maintenance practices influence the performance of buildings.

Together, the two theories explain that while human behaviour influences maintenance decisions, effective maintenance management provides the operational framework required to preserve building quality and performance. They therefore provide an appropriate theoretical foundation for examining the relationship between building finishing, maintenance practices, and building performance in Aba, Nigeria.

Conceptual Review

Building Finishing

Building finishing refers to the final stage of construction in which structural components are completed with architectural finishes that improve appearance, durability, and functionality. Finishing works include plastering, painting, floor and wall finishes, ceiling installations, roofing finishes, windows, doors, plumbing fixtures, and electrical fittings (Chudley and Greeno, 2020). Besides improving aesthetics, building finishes protect structural components against moisture penetration, corrosion, abrasion, and weathering. The quality of building finishing therefore influences the durability, maintenance requirements, and overall performance of buildings.

Building Maintenance Practices

Building maintenance comprises all technical and managerial activities undertaken to preserve or restore buildings to an acceptable operating condition (Douglas, 2021). Maintenance practices may be preventive, corrective, predictive, or condition-based. Preventive maintenance involves planned inspections and servicing before defects occur, whereas corrective maintenance is undertaken after faults have developed. Effective maintenance practices improve building durability, reduce life-cycle costs, enhance occupants' comfort, and maintain property value (Olanrewaju & Abdul-Aziz, 2015).

Building Performance

Building performance describes the extent to which a building satisfies users' requirements throughout its service life. It encompasses structural integrity, functionality, safety, aesthetics, durability, indoor environmental quality, and user satisfaction (Lützkendorf and Balouktsi, 2017). High-performing buildings require fewer repairs, provide safer and healthier environments, and achieve greater economic efficiency than poorly maintained buildings.

Relationship between Building Finishing, Maintenance Practices, and Building Performance

Building finishing and maintenance practices are closely related determinants of building performance. Quality finishing materials protect building components from environmental deterioration, while effective maintenance ensures that emerging defects are detected and corrected before they become severe. Poor finishing coupled with inadequate maintenance accelerates deterioration, increases repair costs, and reduces building performance. Conversely, buildings constructed with quality finishing materials and supported by preventive maintenance generally exhibit greater durability, improved aesthetics, and higher occupant satisfaction. Several studies have examined factors affecting building maintenance and performance. Olanrewaju and Abdul-Aziz (2015) observed that planned maintenance significantly improves building durability, functionality, and service life while reducing maintenance expenditure. Similarly, Douglas (2021) argued that preventive maintenance is more economical than corrective maintenance because it minimizes the occurrence of major defects and prolongs the lifespan of buildings. Windapo and Rotimi (2012) reported that poor workmanship, inadequate maintenance, and the use of inferior construction materials are among the major causes of building deterioration in Nigeria. Common defects identified include wall cracks,

dampness, roof leakages, peeling paint, and deterioration of finishing materials, all of which negatively affect building performance.

A study by Adewunmi et al. (2019) found that maintenance culture significantly influences the physical condition and functionality of public buildings. The study emphasized that inadequate funding, delayed maintenance, and poor maintenance planning contribute substantially to building deterioration.

Similarly, Oladapo (2018) reported that effective maintenance management improves occupant satisfaction, reduces operational costs, and enhances building sustainability. The study recommended that property owners adopt preventive maintenance programmes supported by regular inspections and proper budgeting.

Although these studies provide valuable insights into building maintenance and performance, they largely focus on maintenance management, construction defects, or building quality independently. Few studies have examined the combined influence of building finishing and maintenance practices on overall building performance, particularly within rapidly growing commercial cities in southeastern Nigeria.

The reviewed literature indicates that considerable attention has been given to building maintenance management, construction quality, and building defects in Nigeria. However, most previous studies have concentrated on major cities such as Lagos, Abuja, and Port Harcourt, with limited empirical evidence from Aba. Furthermore, existing studies have generally examined building finishing, maintenance practices, or building performance as separate variables rather than investigating their interrelationships within a single study.

In addition, little empirical evidence exists on how the quality of building finishing and maintenance practices jointly influence building performance under the humid tropical environmental conditions of Aba. This gap limits the availability of information needed by property owners, construction professionals, and policymakers to formulate effective maintenance strategies and improve building quality. The present study addresses this gap by examining the relationship between building finishing, maintenance practices, and building performance in Aba, Nigeria.

MATERIALS AND METHODS

This study adopted a cross-sectional survey research design to assess building finishing, maintenance practices, and building performance in Aba, Abia State, Nigeria. The survey design was considered appropriate because it enables the collection of quantitative data from a defined population at a single point in time and facilitates the examination of relationships among the study variables (Creswell and Creswell, 2023).

The study was conducted in Aba, Abia State, one of the major commercial cities in southeastern Nigeria. Aba has experienced rapid urban growth, resulting in increased residential and commercial building development. The city's humid tropical climate, characterized by high rainfall and humidity, makes regular building maintenance essential for preserving building quality and performance.

The target population comprised 200 building owners, contractors, and maintenance personnel involved in building construction and maintenance within Aba. These respondents were selected because of their knowledge and practical experience regarding building finishing, maintenance practices, and building performance. The sample size was

Table 1: Common Defects and Maintenance Issues in Buildings.

Defects/Maintenance Issues	Frequency	Percentage
Cracks in walls	92	68.7%
Leaking roofs	78	58.2%
Faulty plumbing fixtures	65	48.5%
Electrical issues	56	41.8%
Poor ventilation	48	35.8%
Others	22	16.4%

determined using the Yamane (1967) formula for finite populations:

$$n = \frac{N}{1 + N(e)^2}$$

where: n = sample size; N = population size (200); and e = level of precision (0.05).

Using the formula, a sample size of 134 respondents was obtained. Respondents were selected using a simple random sampling technique, which ensured that every member of the target population had an equal opportunity to participate in the study. Primary data were collected using a structured questionnaire developed from relevant literature on building maintenance and building performance. The questionnaire consisted of two sections. Section A collected respondents' demographic information, while Section B contained items measuring the three study constructs: building finishing, maintenance practices, and building performance. Responses were measured using a five-point Likert scale, ranging from 1 = Strongly Disagree to 5 = Strongly Agree.

To ensure the quality of the research instrument, the questionnaire was subjected to expert review to establish content validity. Specialists in building technology and construction management examined the instrument for relevance, clarity, and adequacy of the measurement items. Their recommendations were incorporated before the final administration of the questionnaire. The instrument achieved a Content Validity Index (CVI) of 0.85, indicating satisfactory content validity.

The reliability of the instrument was determined through a pilot study using Cronbach's alpha coefficient. The reliability coefficients obtained for the study constructs exceeded the recommended threshold of 0.70, indicating that the questionnaire possessed acceptable internal consistency for data collection (Hair et al., 2022).

The questionnaires were administered personally by the researcher with the assistance of trained research assistants where necessary. Respondents were informed of the purpose of the study, and participation was voluntary. Confidentiality and anonymity were assured, and informed consent was obtained before data collection commenced.

The collected data were coded and analyzed using the Statistical Package for the Social Sciences (SPSS) Version 27. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize respondents' characteristics and describe the study variables. Inferential statistics, particularly multiple regression analysis, were employed to examine the influence of building finishing and maintenance practices on building performance. Statistical significance was determined at the 5% level ($p < 0.05$).

RESULTS

A total of 134 questionnaires were completed and found

suitable for analysis, representing the sample size for the study. The collected data were analyzed using descriptive statistics, including frequencies, percentages, and mean scores, while multiple regression analysis was employed to determine the influence of building finishing and maintenance practices on building performance. The findings are presented according to the objectives of the study.

Assessment of the Condition of Building Finishing in Selected Buildings in Aba

The first objective of the study was to assess the condition of building finishing in selected buildings in Aba. Respondents were asked to evaluate the overall condition of building finishes, after which they identified the common defects affecting exterior and interior building components (Table 1). Table 1 shows that the common defects and maintenance issues in buildings in Aba, Abia State, are a significant concern. Cracks in walls top the list with a frequency of 92, representing 68.7% of the respondents. Leaking roofs follow closely, affecting 58.2% of the buildings. Faulty plumbing fixtures and electrical issues are also prevalent, affecting 48.5% and 41.8% of the buildings, respectively. Poor ventilation is another significant issue, affecting 35.8% of the buildings. These findings suggest that building maintenance is a pressing issue in Aba, Abia State, and urgent attention is needed to address these defects. The high frequency of these issues indicates a possible lack of regular maintenance and inspection. The consequences of neglecting these issues could lead to further deterioration and potential safety hazards. Therefore, it is essential to identify the root causes of these defects and develop effective strategies to address them.

The frequency and percentage of these defects provide valuable insights into the state of building maintenance in Aba, Abia State. The results indicate that cracks in walls and leaking roofs are the most common issues, suggesting a possible need for improved construction quality and regular inspections. The findings also highlight the importance of addressing faulty plumbing fixtures and electrical issues to prevent accidents and ensure occupant safety. Overall, the results emphasize the need for a comprehensive approach to building maintenance, including regular inspections, preventive maintenance, and prompt repairs.

Maintenance Practices Adopted for Buildings in Aba

To achieve the second objective, respondents were asked to assess the effectiveness of existing maintenance and repair practices as well as the maintenance approaches commonly adopted (Table 2).

Table 2 summarizes the effectiveness of current maintenance and repair practices in Aba, Abia State, is a mixed bag. While 13.4% of respondents rated the practices as very effective, 35.8% considered them effective. However, 28.4% of respondents were neutral, indicating a lack of confidence in the current practices. Moreover, 14.9% and 7.5% of respondents

Table 2: Effectiveness of Current Maintenance and Repair Practices.

Effectiveness	Frequency	Percentage (%)
Very Effective	18	13.4
Effective	48	35.8
Neutral	38	28.4
Ineffective	20	14.9
Very Ineffective	10	7.5

Table 3: Mean Scores of Effectiveness of Maintenance and Repair Practices.

Maintenance/Repair Practice	Very Effective (5)	Effective (4)	Neutral (3)	Ineffective (2)	Very Ineffective (1)	Total Respondents	Sum of Scores	Mean Score
Regular inspections	20 (100)	40 (160)	30 (90)	20 (40)	24 (24)	134	414	3.21
Preventive maintenance	15 (75)	35 (140)	40 (120)	25 (50)	19 (19)	134	404	2.98
Corrective maintenance	25 (125)	45 (180)	30 (90)	20 (40)	14 (14)	134	449	3.45
Emergency repairs	10 (50)	30 (120)	35 (105)	30 (60)	29 (29)	134	364	2.78

Table 4: Overall Evaluation of Building Performance.

Variable	Mean	Decision
Building Performance	3.78	High

Decision Rule: Mean $\geq$ 3.50 = High; 2.50–3.49 = Moderate; Mean $<$ 2.50 = Low.

rated the practices as ineffective and very ineffective, respectively. These findings suggest that there is room for improvement in the current maintenance and repair practices. The results indicate a need for a more proactive approach to maintenance, focusing on prevention rather than correction. The lack of confidence in the current practices is a concern, highlighting the need for training and capacity building for maintenance personnel.

The results also suggest that the current practices may not be adequately addressing the maintenance needs of buildings in Aba, Abia State. The relatively low percentage of respondents who rated the practices as very effective is a concern, indicating a possible lack of resources, expertise, or commitment to maintenance. The findings emphasize the need for a more comprehensive approach to maintenance, including regular inspections, preventive maintenance, and prompt repairs. By improving the effectiveness of maintenance and repair practices, building owners and occupants can benefit from improved safety, reduced costs, and increased property value.

Table 3 reveals the mean scores of effectiveness of maintenance and repair practices, providing valuable insights into the strengths and weaknesses of the current practices. Corrective maintenance has the highest mean score of 3.45, indicating that respondents consider it relatively effective. Regular inspections follow closely with a mean score of 3.21, suggesting that respondents value the importance of regular checks. However, preventive maintenance and emergency repairs have lower mean scores of 2.98 and 2.78, respectively, indicating areas for improvement. The results suggest that the

current practices are more focused on corrective maintenance, with less emphasis on prevention and emergency preparedness.

The mean scores also indicate that there is room for improvement in all aspects of maintenance and repair practices. The relatively low mean score for preventive maintenance is a concern, suggesting that buildings may be more prone to defects and issues. The low mean score for emergency repairs is also a concern, highlighting the need for better preparedness and response to emergencies. The findings emphasize the need for a more comprehensive approach to maintenance, including regular inspections, preventive maintenance, and prompt repairs. By improving the effectiveness of maintenance and repair practices, building owners and occupants can benefit from improved safety, reduced costs, and increased property value.

Evaluation of the Level of Building Performance

The third objective of the study was to evaluate the level of building performance in Aba. Building performance was assessed based on respondents' overall perception of the functionality, durability, safety, and serviceability of buildings (Table 4).

The findings presented in Table 4 indicate that building performance recorded an overall mean score of 3.78, representing a high level of performance. This suggests that respondents generally perceived buildings in the study area to perform satisfactorily in terms of their functionality, structural stability, safety, and ability to meet users' needs. Despite the

Table 5: Regression Model Fit Summary.

Model	R	R-squared	Adjusted R-squared	Std. Error of the Estimate
1	0.775	0.601	0.589	0.452

Table 6: Analysis of Variance (ANOVA) Results in Building Performance.

Source	Sum of Squares	df	Mean Square	F-value	p-value
Regression	15.123	2	7.562	37.123	0.000
Residual	10.051	131	0.077		
Total	25.174	133			

Table 7: Regression Coefficients.

Variable	β	Std. Error	t	p-value
Constant	2.123	0.321	6.613	0.000
Maintenance Practices	0.401	0.081	4.951	0.000
Building Finishing	0.305	0.092	3.314	0.001

presence of some physical defects, the buildings were considered capable of performing their intended functions effectively.

The relatively high level of building performance may be attributed to the moderate adoption of maintenance activities and the generally satisfactory condition of building finishes. Nevertheless, the occurrence of defects such as wall cracks, roof leakages, and faulty plumbing fixtures indicates that further improvements in maintenance planning and finishing quality are necessary to sustain and enhance building performance over time.

Influence of Building Finishing and Maintenance Practices on Building Performance

The fourth and fifth objectives examined the influence of building finishing and maintenance practices on building performance using multiple regression analysis (Table 5).

The model in Table 5 explains 60.1% of the variance in building performance, indicating a good fit. The strong correlation ($R = 0.775$) shows a significant relationship between predictors and building performance. The adjusted R-squared (0.589) confirms the model's good fit. The standard error (0.452) indicates relatively accurate predictions.

Therefore, the model is a good fit, indicating that maintenance practices and building finishing significantly impact building performance. This regression analysis indicates that maintenance practices and building finishing are significant predictors of building performance ($p < 0.05$). The model explains approximately 60.1% of the variance in building performance.

The regression analysis results (Table 6) indicate that the model is a good fit, with an F-value of 37.123 ($p = 0.000$), suggesting that the variables included in the model significantly explain the variance in building performance. The sum of squares regression (15.123) indicates that a significant portion of the variance in building performance is explained by the model, while the residual sum of squares (10.051) suggests some unexplained variance. This implies that the regression model significantly predicts building performance, with maintenance practices and building finishing being significant predictors. The model is a good fit, suggesting that improving these factors can positively impact building performance.

The regression coefficients reveal that maintenance practices

($\beta = 0.401$, $p < 0.001$) have a significant positive influence on building performance (Table 7). This indicates that improvements in maintenance practices are associated with corresponding improvements in building performance. Similarly, building finishing ($\beta = 0.305$, $p = 0.001$) also exerts a significant positive influence on building performance. Comparing the standardized coefficients, maintenance practices have a relatively stronger influence on building performance than building finishing.

DISCUSSION OF FINDINGS

The study assessed building finishing, maintenance practices, and building performance in Aba, Abia State, Nigeria. The findings indicate that both building finishing and maintenance practices significantly influence building performance. The discussion is presented in line with the objectives of the study. The findings revealed that cracks in walls, leaking roofs, faulty plumbing fixtures, electrical faults, and poor ventilation were the most frequently reported defects affecting buildings in Aba. These defects suggest that many buildings experience varying levels of deterioration, which adversely affect their functional and aesthetic quality. The prevalence of wall cracks and roof leakages indicates that both exterior and interior building finishes require continuous monitoring and timely maintenance to prevent further deterioration.

These findings agree with Windapo and Rotimi (2012), who reported that poor workmanship, inadequate maintenance, and the use of inferior materials contribute significantly to building defects in Nigeria. Similarly, Douglas (2021) noted that deterioration of building finishes increases maintenance requirements and shortens the service life of buildings if defects are not addressed promptly. The study found that respondents generally considered existing maintenance practices to be moderately effective. However, corrective maintenance was the most frequently adopted maintenance strategy, while preventive maintenance received comparatively lower ratings. This suggests that maintenance activities are largely undertaken after defects have developed rather than through planned preventive interventions. This finding supports the principles of Maintenance Management Theory, which emphasizes that planned and preventive maintenance is more effective than reactive maintenance in preserving building

performance and reducing long-term maintenance costs (Mills, 2011). The findings also agree with Olanrewaju and Abdul-Aziz (2015), who observed that preventive maintenance prolongs building lifespan, minimizes deterioration, and reduces maintenance expenditure.

The predominance of corrective maintenance may be associated with financial constraints, inadequate maintenance planning, and limited awareness of the long-term benefits of preventive maintenance. Consequently, buildings are more likely to experience recurring defects and higher maintenance costs over time. The regression analysis demonstrated that building finishing and maintenance practices jointly explained 60.1% of the variation in building performance, indicating that both variables are important determinants of building quality and functionality. Maintenance practices exerted the stronger influence on building performance, followed by building finishing.

The significant influence of maintenance practices is consistent with the Theory of Planned Behaviour (Ajzen, 1991), which suggests that maintenance decisions and actions are influenced by attitudes, available resources, and perceived control. Building owners and managers who recognize the importance of maintenance and possess the capacity to implement it are more likely to maintain buildings effectively, thereby improving building performance.

The positive influence of building finishing also supports previous studies, which emphasize that quality finishing materials protect structural components against environmental deterioration while enhancing durability, functionality, and aesthetic value (Chudley and Greeno, 2020). Buildings with better finishing generally require fewer repairs and maintain acceptable performance over longer periods.

The findings further agree with Douglas (2021) and Olanrewaju and Abdul-Aziz (2015), who concluded that effective maintenance management combined with quality construction materials contributes significantly to improved building performance and longer service life.

Summary of Findings

The study assessed building finishing, maintenance practices, and building performance in Aba, Abia State. The findings revealed that cracks in walls, leaking roofs, faulty plumbing fixtures, electrical faults, and poor ventilation were the most common defects affecting the condition of buildings, indicating that many buildings experience varying degrees of physical deterioration.

The assessment of maintenance practices showed that respondents generally considered existing maintenance practices to be moderately effective. However, corrective maintenance was the most frequently adopted maintenance strategy, while preventive maintenance received a comparatively lower rating, suggesting that maintenance activities are predominantly reactive rather than preventive.

The regression analysis demonstrated that building finishing and maintenance practices jointly accounted for 60.1% of the variation in building performance. Both variables exerted a significant positive influence on building performance, with maintenance practices having a stronger effect than building finishing. These findings indicate that improvements in the quality of building finishing and the adoption of effective maintenance practices are essential for enhancing the performance and longevity of buildings in Aba.

Implications of the Findings

The findings have important implications for building owners,

construction professionals, facility managers, and government agencies. The predominance of corrective maintenance indicates the need to shift towards preventive maintenance through regular inspections, scheduled maintenance programmes, and timely repairs. Such an approach would reduce the occurrence of building defects, improve occupant safety, lower maintenance costs, and enhance the long-term performance of buildings. The results also highlight the importance of using quality finishing materials and ensuring proper workmanship during construction. Improved finishing practices, combined with effective maintenance management, will contribute to greater durability, higher property values, and a more sustainable built environment in Aba.

CONCLUSION

This study assessed building finishing, maintenance practices, and building performance in Aba, Abia State, Nigeria. The findings revealed that many buildings in the study area exhibit physical defects such as wall cracks, roof leakages, faulty plumbing fixtures, electrical faults, and poor ventilation, indicating that the condition of building finishes has been adversely affected by inadequate maintenance and deterioration over time.

The study further established that maintenance practices adopted by building owners and managers are generally moderate in effectiveness. Although regular inspections are undertaken to some extent, corrective maintenance remains the predominant approach, while preventive maintenance is comparatively less practiced. This indicates that maintenance activities are largely reactive rather than planned, thereby increasing the likelihood of recurring defects and higher maintenance costs.

The regression analysis demonstrated that both building finishing and maintenance practices have significant positive influences on building performance. The findings further revealed that maintenance practices exert a stronger influence on building performance than building finishing. This implies that improvements in maintenance planning, timely repairs, and the use of quality finishing materials can substantially enhance the functionality, durability, safety, and overall performance of buildings.

Overall, the study concludes that effective maintenance practices and quality building finishing are indispensable to achieving sustainable building performance in Aba. A shift from corrective to preventive maintenance, supported by proper maintenance planning and the use of durable finishing materials, is essential for reducing building deterioration, extending service life, improving occupant satisfaction, and promoting sustainable management of the built environment.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Building owners and facility managers should adopt preventive maintenance programmes by implementing regular inspections and scheduled maintenance activities. This will enable defects to be identified and corrected before they develop into major structural problems, thereby improving building performance and extending the service life of buildings.
2. Quality building finishing materials should be used during construction and renovation projects. Architects, builders, contractors, and property developers should ensure that

durable and standard materials are selected and that finishing works are executed by competent professionals to minimize premature deterioration and improve the aesthetic and functional quality of buildings.

3. Government agencies and regulatory authorities should strengthen the enforcement of building standards and maintenance regulations. Regular inspections of public and private buildings should be carried out to ensure compliance with approved construction and maintenance standards and to reduce the incidence of building defects.

4. Property owners should allocate adequate financial resources for routine maintenance activities. Establishing dedicated maintenance budgets will facilitate timely repairs and reduce the long-term costs associated with corrective maintenance and major rehabilitation works.

5. Training and capacity-building programmes should be organized for maintenance personnel, contractors, and facility managers. Continuous professional development on modern maintenance techniques, quality finishing practices, and sustainable building management will enhance maintenance efficiency and improve overall building performance.

6. Property owners and facility managers should establish comprehensive maintenance management systems that include maintenance schedules, inspection records, defect reporting mechanisms, and performance monitoring. Such systems will promote systematic maintenance planning and improve decision-making regarding building upkeep.

7. Further studies should examine additional factors influencing building performance, including construction quality, occupants' maintenance behaviour, environmental conditions, and maintenance financing. Similar studies should also be conducted in other cities within Nigeria to provide broader empirical evidence for improving building maintenance practices nationwide.

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