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Building Collapse in Anambra State, Nigeria – A Comparative Review

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Abstract: *This study examines the incidences of reported building collapses in Anambra State, Nigeria from 2012 to September, 2025 and the attendant increasing loss of lives, properties and injuries. A comparison of the incidences of building collapse was also made between Anambra and the F.C.T – Abuja. Findings of this study revealed that Anambra State had since overtaken F.C.T following the rising incidences of building collapse in the last five (5) years to become the second state with the highest incidences of building collapse only after Lagos. The leading causes of building collapse in Anambra state were established to include Use of sub-standard building materials, structural failures, heavy Rainfall/flooding and unprofessional practices/violation of building approvals/regulations. A total of forty-eight (48) cases of building collapses were identified to have occurred in Anambra State as against thirty 30 that occurred in F.C.T from 2008 to 2024. The incidences of building collapse in Anambra State for the period led to the confirmed death of at least 57 persons and injury of at least 172 persons as compared to 64 deaths and at least 84 injuries in the FCT from 2008 to 2024. Recommendations were made in line with the observed leading causes of building collapse in Anambra State.*

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Keywords: *Building, Building Collapse, Incidence, Anambra, Death*

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1. INTRODUCTION

Building collapse is either due to natural climatic and geological conditions or man-made factors. While little may be done to stop the occurrence of the natural causes, the man-made factors can be mitigated to the barest minimum. A building fails when the imposed load cannot be supported by the foundation amongst several other reasons. Building collapse occurs in many places across the world, but the spate of building collapse in Nigeria in recent times is worrisome. The death toll, injuries, psychological trauma and resultant collateral damages occasioned by this phenomenon over the years are high and unquantifiable. In this paper, attempt has been made to re-establish a record of the reported incidences of building collapse in Nigeria and the resultant fatalities as well as the general causes, effects and solutions of building collapse in Nigeria from the findings observed in some cases. This was however done with respect to frequency of occurrence per annum, category of buildings involved and State of occurrence in Nigeria.

Omenihu *et al*., (2016) defined building collapse as the inability of a building component to withstand the loads it was designed for. Ayinuola and Olalusi, (2004) opined that failure is considered as occurring in a component when such component cannot perform its intended functions. In summary, the unplanned falling of a building is referred to as building collapse, while the planned falling of a building is referred to as demolition.

According to Nwigwe *et al.* (2024),it is documented that Nigeria had 541 building collapse incidents over the 48-year period from October 1974 to November 2022. With 322 instances, Lagos State tops the table, followed by Anambra (20), Oyo (19), and Abuja (18), among other states (Sahara News, 2023). Numerous researchers have investigated and recorded the stories of various building disasters in Nigeria, such as the September 12, 2014, Synagogue Church guesthouse building that collapsed in Lagos, which killed at least 116 people, including 84 visitors from South Africa (Mathebula and Smallwood, 2017, Owolabi, Aderounmu and Ogbonna, 2021), the 4-storey building that collapsed in September 2010 at 28 Tinubu Street, Vitoria Island, Lagos, with four fatalities (Windapo and Rotimi, 2012), the 5-storey building
that collapsed in June 2011 at Aderibigbe Street, Maryland, Lagos (Helwig, Hong and Hsiao-wecksler, 2012), the 3-storey building that collapsed in October 2018 at Okpuno, Otolo, in Nnewi, Anambra (Owolabi, Aderounmu and

Ogbonna, 2021), another 3-storey building that collapsed in October 2018 at Ifite Awka, Anambra State (Owolabi, Aderounmu and Ogbonna, 2021), the Reigners Bible Church building collapsed in December 2016 in Akwa Ibom State with 100 fatalities (Mathebula and Smallwood, 2017), The 4-storey building that collapsed in March 2015 at 6 Mogaji Street, Idumota, Lagos, and a twin 4-storey duplex that collapsed in November 2013 at Victoria Island, Lagos, with four casualties (Michael A, Oyewale I and O.A, 2018), and many others.

This paper attempts to update the list of reported building collapse incidences in Anambra State and is structured in the following order of introduction, literature review, methodology, data analysis and discussion, recommendation and conclusion. The sources of data and methodology for this study were derived from a review of selected related literatures, technical reports, author's independent records and online news articles. Data analysis was done by simple descriptive statistics, counts/frequency of occurrence, rankings and percentages.

1.1General Causes of Building Collapse

A structure fails before it collapses. A building can fail as a result of many defects and such failure modes include, but not limited to Punching Failure, Bearing failure and Flexure Failure (Oyenuga, 2019).

The causes of building collapse globally are either natural such as rainstorm, earthquake, earth tremor, landslide, windstorm, flooding etc or man-made (Akuboh, 2013). However, according to the study of Akuboh and Aimola (2024), the causes of building collapse include but not limited to Improper Concreting**,** Sudden Collapse**,** Partial Collapse**,** Structural Failure**,** Heavy Rainfall**,** Unequal Foundation Settlement**,** Faulty Foundation Design**,** Collapse of adjacent building/fence wall**,** Pre-mature removal of formwork for roof slab/concrete decking**,** Use of Sub-Standard Materials without government approval in Building Construction**,** Poor workmanship and supervision/Quackery**,** Inadequate roof and floor slab bracing support**,** Use of building when it has not achieved its minimum allowable strength**,** Gas Explosion**,** Distressed Building**,** Illegal addition of floors**,** Roof Gutter Failure**,** Client's penchant for cheap labour and Client's/Contractors penchant to cut corners.

The works of Omenihu *et al.* (2016) shows the summary of leading causes of occurrences of factors responsible for collapsed buildings in Nigeria. The results were as follows:

1. Structural failures (24.9%),
2. Substandard materials (13.2%),
3. Poor workmanship (12.2%),
4. Faulty design (8.8%),
5. Use of Quacks (7.3%)
6. Inappropriate foundation (6.8%).

The above leading causes of collapses of buildings in Nigeria were also corroborated by the outcome/findings of numerous investigations carried out by various committees and particularly the Nigerian Building and Road Research Institute (NBRRI) and evidently documented in NBRRI Reports numbers 22, 23, 26, 36, 45, 47 and 51 respectively. In most instances the use of substandard materials and poor workmanship are caused by lack of or inadequate supervision (i.e. human factor).

From the foregoing, it stands to reason that the above factors still constitute the major factors responsible for building collapse but the source data for Anambra state will be re-evaluated in this study.

II. METHODOLOGY

2.1 *Sourcing and preparation of data*

The data used in this review were obtained from secondary sources, which include publications by various authors, Television news, Newspaper articles, online sources/Internet and independent records of the author on building collapse in Nigeria from 2013 to 2025.

2.2 *Area of Study*

The research area is Anambra State of Nigeria, which is the southeast region's financial and economic hub. Nigeria has thirty-six states, including Anambra State. It is situated in the southeast of the nation, between latitudes 5° 32' and 6° 45' N and longitudes 6° 43' and 7° 22' E, respectively. The state is diverse in terms of geography, population distribution, and regional development, covering an estimated 4,865 sq km, or 486,500 hectares, of territory. With 21 local government units (Figure 1) and roughly 177 localities, it was formed in 1991 from the former Anambra State, which has since been divided into the states of Anambra, Enugu, and Ebonyi.

About 440 kilometers from Abuja, the federal capital, is the state capital, Awka, an emerging metropolis. Awka, the state capital, is an emerging metropolis situated roughly 440 km from Abuja, the federal capital situated in central Nigeria, and 65 km from Enugu, the former regional capital situated in eastern Nigeria. National Population Commission (2010) reports that the state's population increased from 2,796,475 in 1991 to 4,182,032 in 2006 and 4,461,942 in 2011(Awopeju, Otti and Eduputa, 2014).

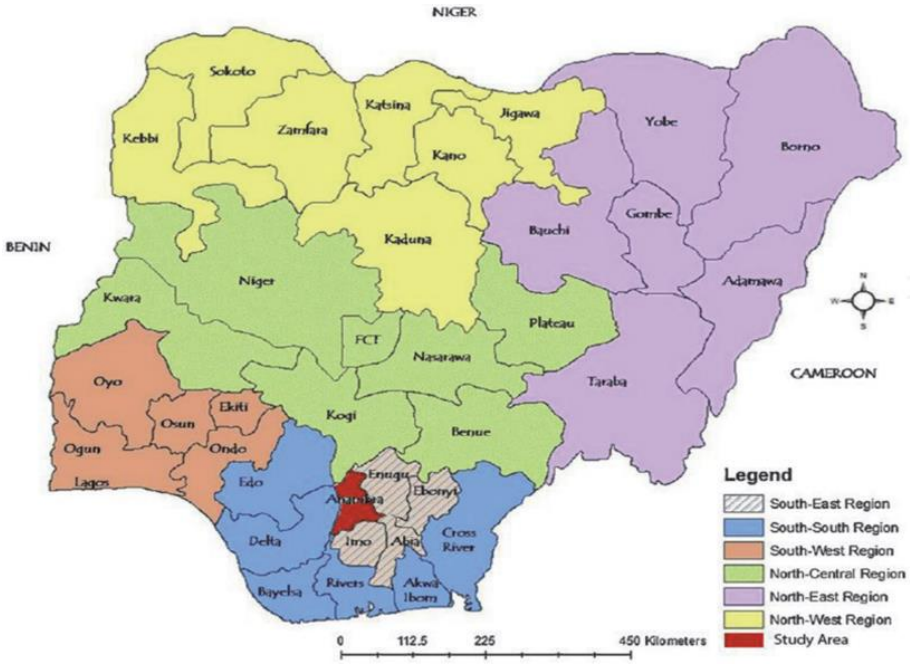

Figure 1: Map of Nigeria showing Anambra State. (Source: Department of Environment Management, Chukwuemeka Odumegwu Ojukwu University, 2021) (Akanwa *et al.*, 2022).

Table1: List of reported cases of collapsed buildings in Anambra State from 2012 to 2025

S/No	Building Type/Description	Address/Building Location	Date of Occurrence	Casualties		Suspected Cause(s)	Source(s) of Information
				Deaths	Injuries		
1	2 Storey Residential Building Under Construction	Awka, Anambra State	2nd March, 2012	2	5	Use of Sub-Standard Building Materials	vanguardngr.com
2	4 Storey Building	Fagge, Onitsha, Anambra State	5th May, 2012	0		Partial Collapse	Author's Record
3	2 Storey Building Under Construction	Miracle Junction, Ifite Road, Close to Rear Gate of Nnamdi Azikiwe University, Awka, Anambra State	5th June, 2012	5	2	Structural cracks	vanguardngr.com
4	1 Storey Uncompleted Building	Onitsha, Anambra State	August, 2012				Author's Record
5	Church Building	St. Thomas the Aguiros Catholic Church, Nnewi, Anambra State	4th November, 2012	5	100		thenationonlineng.net
6	4 Storey Building	20 Ukaeje Street, Awada, On the outskirts of Onitsha, the Anambra State	19th October, 2012	0		Use of Sub-Standard Building Materials	Author's Record
7	An uncompleted One-storey Building at Awka	Awka, Anambra State, Nigeria	2012				Chendo and Obi, 2015
8	4-Storey building under construction	24, Obanye Str., Onitsha South, Anambra	September, 2013	3		Heavy rain	Nwigwe *et al.* (2024)
9	4 Storey Uncompleted Building	St. Andrews Anglican Church, Odoakpu, Onitsha, Anambra State	2nd June, 2014	4	0	Sudden Collapse/Structural Failure	
10	3-storey building under construction	Anaocha, Anambra	September, 2014	1	20		Nwigwe *et al.* (2024)
11	4 Storey Building Under Construction	1, Chief Charles Street, Off Abakaliki Street, Awka, Anambra State	27th July, 2015				Okechukwu C. O, *et al*. (2021)
12	4 Storey Building Under Construction	Standard Plaza Unizik Temporary Site, Awka, Anambra State	August, 2015				Okechukwu C. O, *et al.*(2021)
13	3-storey building under construction	Awka South, Anambra	September, 2015			Heavy rainfall, substandard materials, the speed with which they pursued the construction was horrible, unprofessional practices	Nwigwe *et al.* (2024)
14	3 Storey Building	Permanent site of Federal Polytechnic Oko, Amaokpala, Anambra State	Monday 23 May, 2016, at about 8:45 am.	3			Author's Record
15	2 Storey Building Under Construction	Agba, Ekwulobia in Aguata local government area in Anambra	31st May, 2016	1			Author's Record
16	2 Storey Building Under Construction	Ogidi, Idemili North LGA Near Onitsha, Anambra State	13th July, 2016	7			Okechukwu C.O, *et al.*(2021), Nwigwe et al. (2024)
17	3 Storey Building Under Construction	Agbani Village, Behind Second Market, Ifite-Awka, Anambra State.	30th July, 2016				Okechukwu C.O, *et al.*(2021)
18	Twin 3-storey under construction (Commerial)	Idemili North, Anambra	March, 2017				Nwigwe et al. (2024)

19	4 Storey Building Under Construction	Road 15, Udoka Housing Estate, Awka, Anambra State	22nd June, 2017	3		Heavy rain, substandard materials	Okechukwu C.O, *et al.*(2021), Nwigwe et al. (2024)
20	4 Storey Building Under Construction	Close to Odogwu Hostel, Amansea-Awka, Anambra State	November, 2017				Okechukwu C.O, *et al.*(2021)
21	2-storey building under construction	Anambra East, Anambra	January, 2018	6		Use of substandard materials, unprofessional practices	Nwigwe *et al.* (2024)
22	4 Storey Building Under Construction	Beside Master B Hotel, Ngene-Amawbia, Awka, Anambra State	April, 2018				Okechukwu C.O, *et al.*(2021)
23	4 Storey Building Under Construction	Ifite-Amawsea Road, Unizik Permanent Site, Awka, Anambra State	30th July, 2018				Okechukwu C.O, *et al.*(2021)
24	4-storey building under construction	Owelle-Aja Ugwuagba, Obosi, Idemili North, Anambra	17th July, 2018	0	0	The building earlier had a foundation for two-storey building, but, later, the owner allegedly decided to add two extra floors to it, which affected the foundation as it could not carry the weight of extra floors	Okechukwu C.O, *et al.*(2021)
25	4 Storey Building Under Construction	Near Yahoo Junction, Ifite-Awka, Anambra State.	4th October, 2018				Okechukwu C.O, *et al.*(2021)
26	Four (4) Storey Building Under Construction	No. 7, Ezenwa Street, Onitsha, Anambra State	22nd May, 2019	0	8		Author's Record
27	4 Storey Building Under Construction	No. 7, Ngene Street, Ukpuno, Awka, Anambra State.	15th July, 2019				Okechukwu C.O, *et al.*(2021)
28	Three (3) Storey Building	Next Level Junction, Ifite awka Anambra State	16th Sept., 2019				Okechukwu C.O, *et al.*(2021)
29	A Building	Anambra State	30th October, 2019				Authors Record
30	A Building	Onitsha South, Anambra	December, 2019	**0**	**0**	The plaza was partially burnt in October 2019 during a fire incident at the market	Nwigwe *et al.* (2024)
31	A Building (Bungalow path or No Afected part is one storey)	47, Modebe, Street, Onitsha, Anambra State.	8th April, 2020	1	0	Collapsed Lintel	Nwigwe *et al.* (2024)
32	1 Storey Building	Idemili North, Anambra	September, 2020	1	1		Nwigwe *et al.* (2024)
33	A Building	Idemili North, Anambra	October, 2020	2		Structurally compromised	Nwigwe *et al.* (2024)
34	2-Storey building under construction	Awka South, Anambra	July, 2021	0		Uncontrolled Demolition using inappropriate equipment	Nwigwe *et al.* (2024)
35	2-storey building under construction	Aguta, Anambra	July, 2021		4	Compromised structural integrity	Nwigwe *et al.* (2024)
36	2-storey building under construction	Nnewi North, Anambra	September, 2021				Author's Record
37	Old Building	Ogbaru, Anambra	October, 2022			Flood	Nwigwe *et al.* (2024)
38	2-Storey building	Ekwusigo, Anambra	September, 2022	2		Unprofessional	Nwigwe *et al.*

	under construction					practices	(2024)
39	5-storey building under construction	Idemili South, Anambra	April, 2023		1	Substandard materials, no approval, no agency monitoring	Nwigwe *et al.* (2024)
40	2 Storey Building with Penthouse	Egbu Umuenem, Otolo Nnewi, Nnewi LGA, Anambra State	2nd Sept., 2023	3			Nwigwe *et al.* (2024)
41	3 Storey Market Building Under Construction	Ochanja Market, Onisha South LGA, Onisha, Anambra State	26th February, 2024	6	26		Author's Record
42	5 Storey Building Under Construction	Basden Street, Fagge, Onisha, Anambra State	9th March, 2024		2	Violation of Building Approval (Change of Use to commercial)	Author's Record
43	5-Storey Building under Construction	Idemili South, Anambra	April, 2023		Many	Substandard materials, no approval, no agency monitoring	Nwigwe *et al.* (2024)
44	5 Storey Building Under Construction	Close to Dennis Memorial Grammer School, Onitsha, Anambra State.	11th June, 2024	1	2	Sub-standard materials	Author's Record
45	2 Storey Building Under Construction	Eke Amawbia Market, Awka, Anambra State	4th July, 2024				Author's Record
46	4 Storey Building	Enugu-Onitsha Express Way, Oppt. Five Star Restaurant, Awka, Anambra State	29th January, 2025	0	2		Author's Record
47	2 Storey Building	along Prince Chinedu Akwuaka Street in Akpaka GRA 33, Onitsha, Anambra State	23rd September, 2025	1	1	Possible regulatory breaches or construction malpractice.	punchng.com
48	5 Storey Building	Behind Anambra State House of Assembly, Off Ekwueme Square, Okpuno Awka, Anambra State.	25th September, 2025			Sudden Collapse. Poor concreting and foundation problems suspected.	punchng.com
				57	**172**		

III. RESULTS AND DISCUSSION

Table 1 shows the details of building collapse reported incidences in Anambra State. Table 2.0 shows that a total of forty-seven (47) incidences of building collapse were recorded in Anambra State since the first reported occurrence in 2012 leaving more than fifty-six (56) persons dead and several others injured. According to Akuboh (2019), the FCT accounts for the second highest occurrence of building collapse incidents in Nigeria after Lagos at the time and this forms a basis for comparison.

Table 2: Trend of Building Collapse in Anambra State by Year of Occurrence

Year	Frequency of Occurrence	Deaths
2012	7	12
2013	1	3
2014	2	5
2015	3	
2016	4	11
2017	3	3
2018	5	6

2019	5	
2020	3	4
2021	3	
2022	2	2
2023	3	3
2024	4	7
2025	3	1
	47	**56**

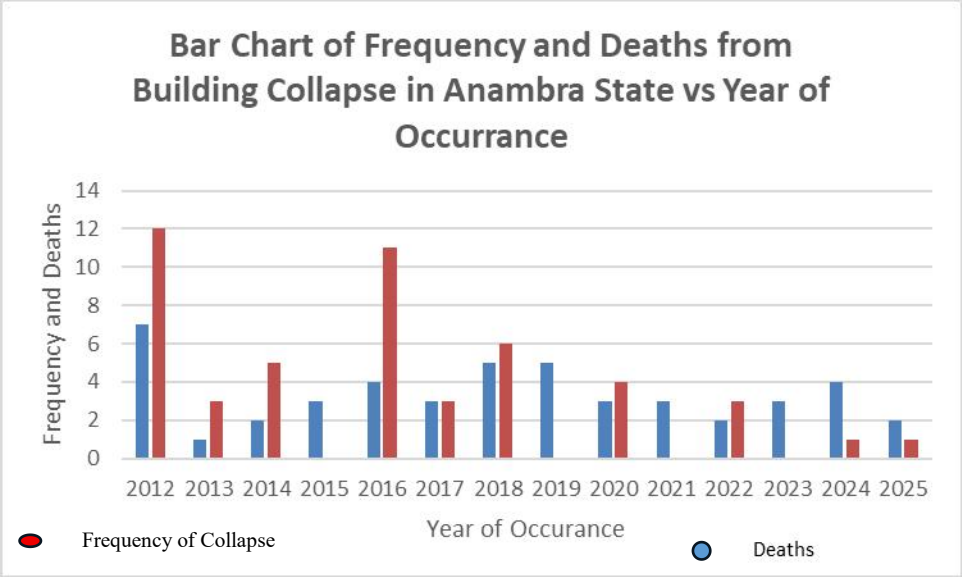

Plate 1: Bar Chart of Frequency of Building Collapse and Deaths vs Year of occurrence in Anambra State.

Table 3 shows the frequency of evaluated incidences of building collapse drawn from Table 1.0 and the corresponding ranking of the causes of building collapse on the basis of their percentage occurrence.

Table 3: Extract of Causes of Building Collapse in Anambra State – 2012 – 2025

S/No.	Cause	No. of Occurrence	Percentage of occurrence (%)	Position
1	Use of Substandard/poor quality Materials	8	28.57	**1st**
2	Structural failure including Under-reinforcement/Improper anchorage of reinforcement	6	21.43	**2nd**
3	Lack of or inadequate regulatory oversight	2	7.143	**4th**
4	Uncontrolled Demolition	1	3.571	**7th**
5	Violations of Building Regulations/approvals	2	7.143	**4th**
6	No Building Approval	1	3.571	**7th**
7	Illegal conversion of buildings/addition of floors	1	3.571	**7th**
8	Lack of Geotechnical Investigation/Low Soil bearing capacity/Weak and/or Inappropriate foundation	1	3.571	**7th**
9	*Force Majeaure*/Rainstorm/Flood/other natural disasters	4	14.285	**3rd**
10	Unprofessional Practices	2	7.143	**4th**
	Total	**28**	**100**	

The above ranking where the use of substandard/poor quality materials emerged as the leading cause of building collapse in Anambra State agrees with the findings of Nicholas *et al.* (2021). In comparison to the finding of Omenihu *et al.* (2016), Substandard materials accounts for the second leading cause of building collapse in Nigeria while the findings of this study established substandard materials as the leading cause of building collapse in Anambra State. This shows that the leading causes of building collapse vary slightly from one city to the other.

3.1 DISCUSSIONS ON RANKED CAUSES OF BUILDING COLLAPSE IN ANAMBRA STATE

Use of Substandard/Poor Quality Materials: The impact of inflation, fluctuating foreign exchange rates and rising cost of building materials such as cement, steel reinforcements, Timber and concrete products over the years in Nigeria has led to the use of substandard and recycled materials at the detriment of structural safety and stability. The penchant to cut corners and make profits can also not be ruled out as one of the reasons for the use of sub-standard building materials by contractors.

Structural failure: Structural members such as Slab, column, beam or cantilevers fail due to reasons such as use of sub-standard materials, improper anchorage of reinforcements, use of inappropriate or inadequate reinforcement sizes, lack of or inadequate supervision of concrete placement works, violation of technical specifications and approved designs and overloading amongst others.

***Force Majeaure*/Rainstorm/other natural disasters:** The forces of nature are also a cause of building collapses. This entails events that man has no control over and they are termed as "*force majeaure*". They include windstorm, torrential rain, earthquake, earth tremor, landslide, flooding etc.

Lack of or Inadequate Regulatory Oversight/Unprofessional Practices: Effective regulatory oversight of construction works is hindered by lack of or inadequate funding, poor policy implementation strategy or the extended influence of bribery and corruption in all forms and ramifications. This gap is a recipe for unprofessional practices in the construction industry.

Violations of Building Regulations/approvals: Building regulations are a set of rules and guidelines that govern the construction and maintenance of buildings. Compliance with these regulations is critical to ensure safety, accessibility, and quality of life for occupants. Unfortunately, building regulation violations are all too common, and they can result in significant penalties, legal action, and even loss of life. A common example of the violation of building regulation is lack of conduct of final inspection and occupation of a building without certificate of fitness for human habitation.

Illegal conversion of buildings/addition of floors: Unauthorized modification of approved building plans and illegal addition of floors constitutes a major problem resulting in the collapse of most buildings.

Lack of Geotechnical Investigation: Soil investigation is a pre-requisite for design of suitable foundation for buildings. Lack of soil investigation therefore could lead to the use of wrong foundations and subsequently structural instability. Strict enforcement by building permit and approval authorities is required to nip this on the board.

IV. CONCLUSION AND RECOMMENDATION

4.1 RECOMMENDATIONS

The recommendations arising from this study are presented in accordance with the ranking of the causes of building collapse in Anambra State.

Use of Substandard Materials (Nicholas *et al*., 2022):

i. Standard organization of Nigeria, (SON) should monitor the standard of blocks moulded-in block industries and impose minimum standards in terms of sand-cement ratios and scrutinize building materials that are supplied for use in Nigeria and ensure that only certified building materials are allowed in the market.
ii. The standard organization of Nigeria should be vigilant to ensure that building materials imported into the country conform to standard requirements.
iii. There is a need to empower and restructure materials testing laboratories in all Geo-political zones of the country.
iv. Building professionals and contractors should ensure proper and efficient checking of materials brought to site and carry out tests such as cube test for concrete, tensile strength for steel bars, slump test for in-situ concrete in a building project following Engineer's specification.
v. The design team in any building project should ensure that building materials supplied to the site by the domestic or

nominated supplier are under the contract specification.

vi. The national regulations regarding building materials are revised and consider the international standards to be adopted.

vii. Build on tested engineering properties of available local building materials in Nigeria.

Structural Failure (Nicholas *et al*., 2022):

i. There is a need to organize periodic public awareness campaign through electronic and print media to sensitize the public on the advantages of using professionals as a way of realizing safe buildings. Civil/Structural Engineers should be engaged in all building construction projects up to and above one suspended floor.

ii. The building construction process involves professionalism in the planning, design, and execution of the project. Engineering consultants must be involved in the design and supervision of buildings

iii. Imposing additional floors beyond original design provision should be avoided.

iv. Reduce the level of exposure of structures to risk by imbibing maintenance culture, seek advice from experts when changing the form and use of buildings, and insist on material and soil tests for multistorey buildings.

v. Regulatory professional bodies such as the Engineering Regulatory, Monitoring and Enforcement (ERM&E) unit of COREN and their corresponding associations should on regular basis organize workshops for stakeholders in the building industry to update their knowledge and highlight the dangers and penalties associated with collapsed buildings.

***Force Majeaure*/Rainstorm/other natural disasters (Nicholas *et al*., 2022)**:

i. Building on flood plains or flood-prone areas should be avoided because flood weakens soil structure and foundation.

ii. Building on the hillside is likely to collapse due to erosion. Ensure that the soil surrounding the building is well protected with concrete or with stone pitching. All stakeholders in the construction industry should adhere strictly to the provisions of the building code.

Lack of or Inadequate Regulatory Oversight/Unprofessional Practices:

i. All stages of building construction must be properly and adequately supervised by the requisite professional member of the built environment and regulators to ensure compliance to design specifications and acceptable construction methods.

ii. The works carried out by the workers on site also need to be closely monitored by the professionals to ensure quality of construction.

iii. Strengthening of State Engineering Regulatory and Monitoring (ERM) Team of the Council for the Regulation of Engineering in Nigeria (COREN) through adequate funding amongst others will help prevent building collapse in Anambra State.

Violations of Building Regulations/approvals:

i. Building Regulatory Authorities should ensure strict enforcement of building regulations such as inspection and issuance of certificate of fitness for human habitation for completed buildings.

ii. Building Regulatory Authorities should also ensure that the purpose of building use are not changed arbitrarily too.

Illegal conversion of buildings/addition of floors:

i. Foundation of buildings are designed to carry a scientifically determined load based on the properties of the underlying soil/strata. However, alteration or addition of the number of suspended floors without recourse to this consideration and revalidation by the authorities has been one of the factors responsible for many incidences of building collapse in Nigeria. All proposals for increase of number of suspended floors must be subjected to expert advice and submitted to Building Regulatory Authorities for vetting prior to any action.

ii. The conversion of buildings from residential to commercial or any other use contrary to the approved use is illegal and should be avoided as much as practicable.

Lack of Geotechnical Investigation:

The Geotechnical properties of the soil and the nature of the proposed building determine the type of foundation to be adequately designed and provided. The conduct of geotechnical investigation is therefore of utmost importance.

4.2 CONCLUSION

Incidences of Building collapses in Anambra State, Nigeria have no doubt led to the untimely deaths and loss of properties and investments of inestimable value even though many of such cases might have occurred unnoticed or unreported.

Having identified the leading causes of building collapses in Anambra State, Nigeria, prevention is the ultimate solution. In this regard, the recommendations herein contained if implemented to the later, will help reduce the incidences of building collapse by addressing the root causes of such collapses.

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