



Assessing the Walling Materials Selection on Space Flexibility in Workers Housing Estate, Laderin, Abeokuta, Ogun State, Nigeria

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Abstract

Housing needs to adapt to changes over its life cycle. However, the apartment design in Nigeria public estate often restricts residents from making modifications to suit evolving needs. Existing studies on flexibility in apartment design focus on definitions and general affordability, but the specific impact of wall material selection on space flexibility remains underexplored. This study addresses this gap by exploring the role of walling material selection in achieving space flexibility and affordability in Workers Housing Estate, Laderin, Abeokuta, Ogun State. Drawing on a comprehensive literature review, hypotheses were formulated and tested through a structured questionnaire administered to 241 residents in the estate. Descriptive and inferential statistics were used for the analysis. Results revealed the significantly impact of sand-crete, brick, drywall, and glass on the partition-ability, extendibility and expandability characteristics of housing flexibility. The study concludes that Partition-ability characteristics of flexibility was the leading factor influencing walling material selection. While, Expandability was the lowest determinant in the study area. The study recommends the incorporation of partition-ability features as well as the promotion of drywall material usage in government-built estates.

Keywords: government-built estate, materials selection factors, space flexibility, walling material

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Introduction

Housing is a fundamental human need that significantly impacts economic and social well-being (Alabi and Hungbeji, 2023). However, a significant proportion of residential buildings in Nigeria suffer from poor design and inadequate habitability standards, particularly concerning the selection of appropriate walling materials and the flexibility of interior spaces (Akanbi, 2021). Housing design encompasses structural functionality, artistic considerations, and technological advancements, all of which influence the adaptability and long-term usability of living spaces (Olayemi, 2023).

The physical features of a house depend on environmental factors, available building materials, and builders' technological knowledge (Magdziak, 2019). Selecting suitable materials requires considering multiple factors, as there is no universally preferred choice (Rahman et al., 2008). Regular analysis of material options is essential for informed decision-making during design processes (Ajayi and Joel, 2021). In Nigeria, the primary materials for external walls include mud/earth bricks, sandcrete, bricks, and concrete, accounting for 89.1% of wall materials in residential units (Akanbi, 2021).

The affordability of housing in Nigeria is closely tied to the selection of high-quality, low-cost, and sustainable building materials. Research has demonstrated that material selection significantly impacts the sustainability of housing delivery, contributing to reduced maintenance costs, improved health outcomes, enhanced energy efficiency, and increased design flexibility (Babatunde et al., 2022; Adeleke, 2023). Moreover, walling materials influence the structural integrity of buildings and the flexibility of internal spaces, which are essential for adapting housing to the evolving needs of residents (Olayemi, 2023).

Despite the importance of flexibility and affordability in sustainable housing, limited research exists on these issues within government-built estates, particularly in medium-sized cities like Abeokuta. Most existing studies have focused on large urban centers such as Lagos and Ibadan (Adeyemi et al.,

2023; Babatunde et al., 2022; Adeleke, 2023), leaving a gap in understanding the relationship between material selection and spatial flexibility in other regions. This study aims to address this gap by investigating the impact of walling material selection on space flexibility and housing affordability in Laderin Housing Estate, Abeokuta. To achieve this objective, the following hypothesis is proposed:

- H_0 : There is no significant relative contribution of partition-ability, extendibility, and expandability in relation to walling material selection in the study area.
- H_1 : There is a significant relative contribution of partition-ability, extendibility, and expandability in relation to walling material selection in the study area.

Laderin Housing Estate, a government-built residential estate in Ogun State, was chosen for this study due to its focus on affordability and flexibility for public sector workers.

Literature Review

Flexibility and affordability in housing are critical for improving accessibility to government housing. Atamewan & Olagunju (2019) advocated for a low-cost housing strategy focusing on minimal, simple designs built with inexpensive materials. These designs prioritize flexibility in space usage, enabling future modifications to accommodate residents' needs. Napier (2002) highlighted that using an open-plan concept, with the option to add internal walls post-occupation, reduces the initial cost of core housing by eliminating upfront partitioning expenses. Larissa (2013) emphasized the role of flexibility in achieving affordability for low-cost housing through three principles:

1. Flexible use of the sitting room for dining.
2. Flexible use of the kitchen for food storage.
3. Flexible subdivision of internal spaces after occupation.

These principles allow minimally designed core housing units to reduce initial costs while offering adaptability, increasing affordability, and enabling larger-scale housing production for broader reach. Flexibility in housing design incorporates:

- Partition-ability: Allows reconfiguration of internal spaces.
- Extendibility: Facilitates structural extensions for additional functionality.
- Expandability: Supports spatial enhancements for greater utility (Adeyemi et al., 2023).

Internal walling plays a critical role in facilitating flexibility, with partition walls serving as non-load-bearing elements that define living, sleeping, cooking, and service areas (Seeley, 2022; Sharma et al., 2016). In the Nigerian context, common materials for partitioning include brick, drywall, glass, and sand-crete blocks. These materials are typically selected based on factors such as cost, physical performance, cultural preferences, and durability (Alagbe et al., 2019). However, material scarcity and rising costs continue to challenge the delivery of flexible and affordable housing.

Factors Influencing the Choice of Walling Materials Selection

Walling material selection is a multidisciplinary process involving stakeholders such as architects, structural engineers, quantity surveyors, contractors, site managers, clients, and suppliers (Hassan, 2017). These stakeholders play critical roles in ensuring that materials meet project goals related to functionality, aesthetics, sustainability, and cost-effectiveness.

Hassan (2017) emphasized that stakeholders are legally accountable for material choices and their implications on ecological performance and lifecycle sustainability. Flórez et al. (2009) proposed a decision-making framework that integrates subjective and objective criteria to evaluate material performance, durability, and quality. Rahman et al. (2008) contributed by developing a multi-criteria decision-making (MCDM) model that assists stakeholders

in balancing lifecycle costs, technological innovation, and performance.

Van Kesteren et al. (2005) introduced a materials choice model emphasizing the importance of manufacturing processes, material properties, and functional requirements. Beyond technical attributes, Gallent et al. (2010) highlighted the significance of intangible aspects, such as aesthetics and user interaction, in material selection. Similarly, Wastiels & Wouters (2008) emphasized sensory considerations like texture and color but noted the lack of frameworks addressing the interaction of material categories in architectural design.

From a sustainability perspective, Glavič & Lukman (2007) applied optimization techniques to incorporate subjective preferences in material selection, while Abeysundara et al. (2009) prioritized ecological, financial, and social factors in material choice. Their findings favored ecological considerations over financial and social aspects. Building on these insights, Van Bortel & Gruis (2019) proposed six evaluation categories for walling materials: environmental and health impacts, sensorial qualities, socio-cultural relevance, technological performance, economic costs, and site-specific considerations.

Despite these contributions, limited research exists on how these factors influence material selection in government-built estates in Nigeria, particularly concerning internal partitioning and spatial adaptability. This study addresses this gap by examining walling material selection in Laderin Housing Estate and its implications for space flexibility and affordability, contributing valuable insights into sustainable housing strategies tailored to the Nigerian context.

Methodology

The method adopted was a case study through survey methods with the administration of 241 copies of questionnaires to the residents of Workers Housing Estate in Laderin, Abeokuta. This estate comprises expandable apartments with feature of flexibility. The secondary data were sourced through

Published and unpublished literature, including government records. A sample size of 241 apartments, representing over 45% of the total 536 apartments in the estate, was selected. This sample size exceeds the minimum recommended size of 217 for a 95% confidence level, as specified by Krejcie and Morgan's (1970) table. A systematic random sampling method ensured unbiased selection, targeting every third unit. 228 out of 241 copies of the questionnaires distributed were returned, with 5 copies of the questionnaires found incomplete. Consequently, 223 valid questionnaires, representing 92.5% of the total administered, were used for data analysis.

Table 1: The Sample frame for the residents of workers estate in Abeokuta

Name of estate	Types of housing unit	number of housing units	45% of housing units
Workers Estate Laderin, Abeokuta	1 Bedroom semi-detached bungalow	264	119
	2 Bedroom semi-detached bungalow	172	77
	3 Bedroom semi-detached bungalow	100	45
	Total	536	241

Source: Authors' field survey, 2025.

Descriptive and inferential statistics were applied using SPSS. Hypotheses were tested to determine the relative contributions of partition-ability, extendibility, and expandability in walling material selection.

Results and Discussion

The extent that walling materials influence space partition-ability

The information in table 2 reveals the extent to which different walling method had influence on space partition-ability as more than 75 per cent of the respondents fall above the average mean of 3.22 as Drywall material selection for space partitioning is relatively costly recorded a mean of 3.22, Selection of drywall material for space partitioning do waste time had a means of 3.43, Partitioning with the use of dry wall is aesthetic and durable in nature

recorded a mean of 3.30, Glass wall material selection space partitioning is relatively costly recorded a mean of 3.29. Also Partitioning with the use of sandcrete wall had socio-cultural dictate and physical property advantages recorded a means of 3.28, Selection of the use of glass wall material make space partitioning easier Partitioning with the use of glass wall is aesthetic and durable in nature recorded a mean of 3.38 so also Partitioning with the use of glass wall had socio- cultural dictate and physical property advantages had a mean of 3.50. Selection of the use of sandcrete wall material make space partitioning easier Selection of the use of drywall material make space partitioning easier recorded a mean of 3.01, Partitioning with the use of sandcrete wall had socio-cultural dictate and physical property advantages recorded a mean of 3.28, Partitioning with the use of glass wall is aesthetic and durable in nature had a means of 3.38, Selection of brick wall material for space partitioning do waste time had a means of 3.45 Partitioning with the use of brick wall had socio-cultural dictate and physical property advantages had a mean of 3.24. So also Partitioning with the use of brick wall is aesthetic and durable in nature recorded a mean of 3.42. It implies that majority of respondents indicated that walling materials had different influences on the rate of space partitioning for housing affordability in the study area as more than 75 per cent of them strongly agree, agree or neutral to the variables raised whereas less than 25 per cent of them strongly disagree to the variables raised.

Table 2: The extent that walling material influence space partition-ability

	Items	SA	A	N	D	SD	Mean
1.	Drywall material selection for space partitioning is relatively costly	58 (22.5)	86 (34.0)	18 (7.0)	41 (16.0)	52 (20.5)	3.22
2.	Selection of the use of drywall material make space partitioning easier	46 (18.0)	85 (33.5)	22 (8.5)	26 (11.0)	74 (29.0)	3.01
3.	Selection of drywall material for space partitioning do waste time	65 (25.5)	81 (32.0)	43 (17.0)	29 (11.5)	36 (14.0)	3.43

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	Items	SA	A	N	D	SD	Mean
4.	Partitioning with the use of dry wall is aesthetic and durable in nature	53 (21.0)	84 (33.0)	39 (15.5)	41 (16.0)	37 (14.5)	3.30
5.	Partitioning with the use of dry wall had socio-cultural dictate and physical property advantages.	48 (19.0)	98 (38.5)	34 (13.5)	22 (8.5)	52 (20.5)	3.27
6.	Selection of the use of glass wall material make space partitioning easier	51(20 .0)	35 (36.5)	34 (13.5)	33 (13.0)	43 (17.0)	3.30
7.	Glass wall material selection space partitioning is relatively costly	65 (25.5)	81 (32.0)	27 (10.5)	25 (10.0)	56 (22.0)	3.29
8.	Selection of glass wall material for space partitioning do waste time	53 (21.0)	77 (30.5)	37 (14.5)	32 (12.5)	55 (21.5)	3.17
9.	Partitioning with the use of glass wall is aesthetic and durable in nature	80 (31.5)	55 (21.5)	41 (16.0)	39 (15.5)	39 (15.5)	3.38
10.	Partitioning with the use of glass wall had socio-cultural dictate and physical property advantages.	86 (34.0)	48 (19.0)	50 (19.5)	44 (17.5)	25 (10.0)	3.50
11	Selection of the use of sandcrete wall material make space partitioning easier	70 (27.5)	50 (19.5)	44 (17.5)	52 (20.5)	38 (15.0)	3.24
12	Sandcrete wall material selection for space partitioning is relatively costly	51 (20.0)	85 (33.5)	24 (9.5)	51 (20.0)	43 (17.0)	3.20
13	Selection of sandcrete wall material for space partitioning do waste time	70 (27.5)	72 (28.5)	29 (11.5)	32 (12.5)	51 (20.0)	3.31
14	Partitioning with the use of sandcrete wall is aesthetic and durable in nature	58 (23.0)	56 (22.0)	51 (20.0)	41 (20.5)	37 (14.5)	3.19
15	Partitioning with the use of sandcrete wall had socio-cultural dictate and physical property advantages.	61 (24.0)	81 (32.0)	29 (11.5)	34 (13.5)	48 (19.0)	3.28
16	The use of brick wall material make space partitioning easier	57 (22.5)	70 (27.5)	39 (15.5)	50 (19.5)	38 (15.0)	3.23
17	Brick wall material selection for space partitioning is relatively costly	70 (27.5)	72 (28.5)	36 (14.0)	39 (15.5)	37 (14.5)	3.39

	Items	SA	A	N	D	SD	Mean
18	Selection of brick wall material for space partitioning do waste time	91 (36.0)	48 (19.0)	27 (10.5)	57 (22.5)	30 (12.0)	3.45
19	Partitioning with the use of brick wall is aesthetic and durable in nature	71 (28.0)	79 (31.0)	24 (9.5)	46 (18.0)	34 (13.5)	3.42
20	Partitioning with the use of brick wall had socio-cultural dictate and physical property advantages.	56 (22.0)	90 (35.5)	19 (7.5)	36 (14.0)	42 (21.0)	3.24
	Average Weighted Mean						3.22

Source: Field survey 2025. Sample size = 241. SD (standard deviation). M (mean). Scale: Strongly Disagree (SD), Disagree (D), Neutral (N) Agree (A), Strongly Agree (SA). Scale mean = 3.0.

The extent that walling material selection influence space extension

The information in table 3 reveals the extent to which the walling material influence space extension as more than 75 per cent of the respondents fall above the average mean of Dry wall material selection for space extension is relatively costly recorded a mean of 3.29; Selection of dry wall material for space extension do waste time scored a mean of 3.37, Space extension with the use of dry wall is aesthetic and durable in nature had a mean of 3.30, Space extension with the use of dry wall had socio-cultural dictate and physical property advantages recorded a mean of 3.33. Glass wall material selection for space extension is relatively costly scored a mean of 3.29, Space extension with the use of glass wall had socio-cultural dictate and physical property advantages recorded a mean of 3.30, The use of glass wall material make space extension easier had a mean of 3.37, made use of sandcrete wall material for space extension due to its potential use for space extension recorded a mean of 3.32, Sandcrete wall material selection for space extension is relatively costly scored a mean of 3.29, Selection of sandcrete wall material for space extension do waste time added a mean of 3.36, Space extension with the use of sandcrete wall is aesthetic and durable in nature had a mean of 3.45, The use of brick wall material make space extension easier recorded a mean

of 3.29. Brick wall material selection for space extension is relatively costly had a mean of 3.36. Space extension with the use of brick wall is aesthetic and durable in nature recorded a mean of 3.37. It implies that majority of respondents indicated that walling materials had different influence on the rate of space extension for housing affordability in the study area as more than 75 per cent of them strongly agree, agree or neutral to the variables raised whereas less than 25 per cent of them strongly disagree to the variables raised.

Table 3: The extent that walling material influence space extension

	Items	SA	A	N	D	SD	Mean
1.	The use of dry wall material makes space extension easier	56 22.0	86 34.0	15 6.0	33 13.0	64 25.0	3.15
2.	Dry wall material selection for space extension is relatively costly	58 23.0	81 32.0	27 10.5	47 18.5	41 16.0	3.38
3.	Selection of dry wall material for space extension do waste time	81 32.0	50 19.5	37 14.5	53 21.0	33 13.0	3.37
4.	Space extension with the use of dry wall is aesthetic and durable in nature	71 28.0	65 25.5	22 8.5	61 24.0	36 14.0	3.30
5.	Space extension with the use of dry wall had socio-cultural dictate and physical property advantages.	67 26.5	67 26.5	41 16.0	41 16.0	38 15.0	3.33
6.	The use of glass wall material for space extension makes space extension easier	74 29.0	62 24.5	23 9.0	50 19.5	46 18.0	3.27
7.	Glass wall material selection for space extension is relatively costly	66 26.0	74 29.0	27 13.5	22 11.0	41 20.5	3.29
8.	Selection of glass wall material for space extension do waste time	54 27.0	54 27.0	32 12.5	27 10.5	58 23.0	3.24
9.	Space extension with the use of glass wall is aesthetic and durable in nature	57 23.5	67 26.5	32 12.5	38 15.0	57 22.5	3.14
10.	Space extension with the use of glass wall had socio-cultural dictate and physical property advantages.	72 28.5	57 22.5	30 12.0	36 14.0	58 23.0	3.30
11.	The use of glass wall material makse space extension easier	69 27.0	64 25.0	41 16.0	43 17.0	38 15.0	3.37

	Items	SA	A	N	D	SD	Mean
12.	I made use of sandcrete wall material for space extension due to its potential use for space extension	69 27.0	64 25.0	41 16.0	45 18.0	44 14.0	3.32
13.	Sandcrete wall material selection for space extension is relatively costly	64 25.0	64 25.0	44 17.5	47 18.5	44 14.0	3.29
14.	Selection of sandcrete wall material for space extension do waste time	71 28.0	67 26.5	34 13.5	44 17.5	37 14.5	3.36
15.	Space extension with the use of sandcrete wall is aesthetic and durable in nature	71 28.0	83 32.5	29 11.5	30 12.0	41 16.0	3.45
16.	Space extension with the use of sandcrete wall had sociocultural dictates and physical property advantages.	72 28.5	64 25.0	24 9.5	47 18.5	47 18.5	3.27
17	The use of brick wall material makes space extension easier	64 25.0	64 25.0	44 17.5	47 18.5	36 14.0	3.29
18	Brick wall material selection for space extension is relatively costly	71 28.0	67 26.5	34 13.5	44 17.5	37 14.5	3.36
19.	Selection of brick wall material for space extension do waste time	69 27.0	69 27.0	32 12.5	27 10.5	58 23.0	3.24
20.	Space extension with the use of brick wall is aesthetic and durable in nature	81 32.0	50 19.5	37 14.5	56 22.0	08 3.0	3.37
	Average Weighted mean						3.29

Source: Field Survey 2025. Sample size = 241. SD (Standard Deviation). M (Mean). Scale: Strongly Disagree (SD), Disagree (D), Neutral (N) Agree (A), Strongly Agree (SA). Scale mean = 3.0.

The extent that walling material selection influence space expandability

The information in table 4 reveals the extent to which the extent that walling material do influence space extension as more than 75 per cent of the respondents fall above the average weighted mean of 3.66; Space expansion with the use of dry wall is aesthetic and durable in nature recorded a mean of 3.76, Space expansion with the use of glass wall is aesthetic and durable in nature had a mean of 3.88, Space expansion with the use of glass wall had socio-cultural dictate and physical property advantages scored a mean of 3.76.

Sandcrete wall material make space expansion easier had a mean of 3.87 whereas the use of sandcrete wall material selection for space expansion is relatively costly recorded a mean of 3.89, Selection of sandcrete wall material for space expansion do waste time recorded a mean of 4.07, Space expansion with the use of sandcrete wall is aesthetic and durable in nature had a mean of 3.81. Space expansion with the use of sandcrete wall had socio-cultural dictate and physical property advantages with a mean of 3.85. Also, Brick wall material make space expansion easier scored a mean of 3.68, Brick wall material selection for space expansion is relatively costly recorded a mean of 3.79, whereas Selection of brick wall material for space expansion do waste time do recorded a mean of 3.74. Space expansion with the use of brick wall is aesthetic and durable in nature recorded a mean of 3.80. It implies that majority of respondents indicated that walling materials had different influences on the rate of space Expandability for housing affordability in the study area as more than 75 per cent of them strongly agree, agree or neutral to the variables raised whereas less than 25 per cent of them strongly disagree to the variables raised. Plate 1 and 2 illustrate pictorial representation of the structural arrangement of building in the estate that give room for expansion and extension at the instance of the allottee and occupants.

Table 4: Extent that walling material selection influence space expandability

	Attribute	SD	D	N	A	SA	Mean
1	Dry wall material makes space expansion easier	92 36.5	95 37.3	26 10.4	34 13.5	06 2.3	3.54
2	The use of dry wall material selection for space expansion is relatively costly	78 30.7	97 38.5	44 17.3	24 9.6	10 3.8	3.51
3	Selection of dry wall material for space expansion do waste time	76 30.0	125 49.2	48 18.8	47 18.8	5 1.9	3.60
4	Space expansion with the use of dry wall is aesthetic and durable in nature	57 22.3	78 30.8	67 26.2	10 3.8	43 16.9	3.76

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	Attribute	SD	D	N	A	SA	Mean
5	Space expansion with the use of dry wall had socio-cultural dictate and physical property advantages.	64 25.0	31 12.3	36 14.2	86 33.8	37 14.6	3.50
6	Glass wall material space expansion easier	51 20.0	74 29.2	87 34.2	22 8.8	19 7.6	3.47
7	The use of glass wall material selection for space expansion is relatively costly	61 24.2	73 28.8	41 16.2	44 17.3	34 13.5	3.49
8	Selection of glass wall material for space expansion do waste time	80 31.5	96 37.7	35 13.8	15 6.1	22 8.5	3.38
9	Space expansion with the use of glass wall is aesthetic and durable in nature	75 29.6	94 37.3	36 14.2	34 13.5	14 5.4	3.88
10	Space expansion with the use of glass wall had socio-cultural dictate and physical property advantages.	76 30.0	97 38.1	30 12.3	36 14.2	14 5.4	3.76
11	Sandcrete wall material make space expansion easier	62 24.3	107 42.3	54 21.2	22 8.5	10 3.8	3.87
12	The use of sandcrete wall material selection for space expansion is relatively costly	87 34.2	105 41.5	58 22.3	58 10.8	5 1.9	3.89
13	Selection of sandcrete wall material for space expansion do waste time	73 28.8	95 37.3	46 18.1	21 8.1	20 7.7	4.07
14	Space expansion with the use of sandcrete wall is aesthetic and durable in nature	42 16.2	55 21.5	38 15.0	74 29.2	46 18.1	3.81
15	Space expansion with the use of sandcrete wall had socio-cultural dictate and physical property advantages.	58 22.7	97 38.1	24 9.6	47 18.5	28 11.1	3.85
16	Brick wall material makes space expansion easier	80 31.6	86 33.8	45 17.7	36 14.6	06 2.3	3.68
17	Brick wall material selection for space expansion is relatively costly	76 30.0	125 49.2	48 18.8	49 19.2	4 1.5	3.79
18	Selection of brick wall material for space expansion do waste time	55 21.1	73 28.1	89 34.2	23 8.8	20 7.6	3.74
19	Space expansion with the use of brick wall is aesthetic and durable in nature	48 18.8	106 41.9	24 9.6	47 18.5	28 11.1	3.80

	Attribute	SD	D	N	A	SA	Mean
20	Space expansion with the use of brick wall had socio-cultural dictate and physical property advantages.	06 2.3	39 15.4	36 14.6	125 49.2	48 18.8	2.98
	Average Weighted Mean						3.66

Source: Field Survey 2025. Sample size = 241. SD (Standard Deviation). M (Mean). Scale: Strongly Disagree (SD), Disagree (D), Neutral (N) Agree (A), Strongly Agree (SA). Scale mean = 3.0.

Hypothesis

In order to unravel the outcome of this study, the following hypotheses are stated and analysed:

- Ho: There is no significant relative contribution of Partition-ability, Extensibility and Expandability in relation to walling material selection in study area.
- H1: There is a significant relative contribution of Partition-ability, Extensibility and Expandability in relation to walling material selection in study area.

Table 5 revealed the relative contribution of each of the independent variables as determinants of the dependent variable (walling material selection for space flexibility and affordability in Worker’s housing estate Abeokuta, Ogun state). Partition-ability characteristics (Beta = .469; t = 9.235; p < .05) was the most potent determinant out of the three variables (as it entails that all the available walling types, dry wall, glass wall sand-crete wall and brick wall are suitable for all forms of partitioning depending on the wish of the occupants) closely followed by Extensibility characteristics (Beta = .348; t = 7.538; p < .05) which is next in order of potency while Expandability characteristics is the third determining factors of walling material selection for space flexibility and affordability in Worker’s housing estate Abeokuta, Ogun state as (Beta = .222; t = 3.701; p < 0.05). Therefore, the postulated null hypothesis is rejected in favour of the alternative hypothesis. This means that each of the

three independent variables, that is, expandability characteristics, extendibility characteristics and partition-ability characteristics significantly contributed to the determination of walling material selection for space flexibility and affordability in Workers Estate Abeokuta. However, partition-ability characteristics is the leading determining factor out of the three factors.

The outcome of the hypothesis pertaining to the dominance of Partition-ability characteristics as a leading determining factor in the determination of walling material selection for space flexibility and affordability in Worker’s housing estate Abeokuta, Ogun state is in line with the study of An evaluation of apartment design flexibility pertaining to apartment affordability in LSDPC estates, Lagos, Nigeria conducted by Adeyemi, et al., (2023) where the study held the view that that Partition-ability, Extendibility and Expandability characteristics had significant influence on Affordability at $t = 13.869$ ($p < 0.05$), $t = 9.685$ ($p < 0.05$), and $t = 2.094$ ($p < 0.05$) respectively in LSDPC estates, Lagos with the standardized coefficients that had it that partition-ability had the greatest influence on affordability of apartments in LSDPC estates, Lagos.

Table 5: Relative contribution of Partition-ability, Extendibility and Expandability in relation to walling material selection in the study area

Independent variables	B	Std. error	Beta	T	P	Remark
(Constant)	45.994	4.115		11.177	0.000	
Expandability characteristics	.420	.087	.222	3.701	0.000	Sig
Extendibility characteristics	.336	.061	.348	7.538	0.000	Sig
Partition-ability characteristics	.289	.038	.469	9.235	0.000	Sig

Source: Field Survey 2025.

Conclusion

The study concludes that walling materials significantly influence space flexibility and affordability in Worker's Housing Estate, Abeokuta. Partition-ability characteristics was the leading factor influencing walling material selection. This finding aligns with previous studies, such as Adeyemi et al. (2023), which emphasized partition-ability as a major contributor to apartment affordability. All walling types—drywall, glass, sandcrete, and brick—are suitable for various partitioning, extension, and expansion purposes, depending on user needs. The study recommends that partition-ability attributes of flexibility need to be incorporated at design stage which could form the basis for housing policy in the state and the country as a whole. Housing projects should focus on materials that balance cost, durability, and socio-cultural needs to meet occupant requirements. Additional studies should explore cost-effective and durable materials that ensure flexibility without compromising quality.

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