



# Housing Floor Finishes Choice-Behaviours and Motivations

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## Abstract

The quality of finishes of housing space is imperative for the achievement of a qualitative living environment. This paper presents a part of the findings of housing interior finishes choices – behaviour and motivation among prospective house owners in Nigeria. The study was conducted within the methodological and conceptual frameworks of Means-End Chain (MEC) and Stated Housing Preference and Housing Choice (SHPHC) models. A questionnaire survey and semi-structured interviews were used to generate data which were content analysed. The results showed that 71.95% of the respondents preferred ceramic tiled floor finishes as the various motivational factors. Further research in housing interior finishes choice motivation is required.

**Keywords:** means-end chain, laddering, stated housing preference and housing choice, housing interior finishes

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## 1.0 Introduction

Housing space quality is defined as “fitness for use” (Ozsoy & Gokmen, 2005, p.19) and is achievable largely by involving the would-be user of the space through the articulation and incorporation of the user’s design needs and expectations. Smith et al. (1997) posited that the concept of quality has a very broad usage, encompassing a variety of meanings. They defined quality as “distinguishing properties that promote a degree of excellence”(p. 232) These ‘distinguishing properties’ can be determined only by eliciting from the would-be users of the housing their choices of the kind and quality of housing space they prefer; and to disentangle their motivations for such preferences. Achieving quality housing space will invariably engender the achievement of person-environment congruence (PEC). Housing Choice and Preference is explored based on the relationship between prospecting house owner’s expectations and housing interior finishes that will support his personal value needs, and release fulfilment within his housing unit’s environment. This paper presents a part of the findings for the interior finishes choices and preferences among prospective house owners in Nigeria.

## 2.0 Theoretical Framework

### The Means-End Chain (MEC) Model

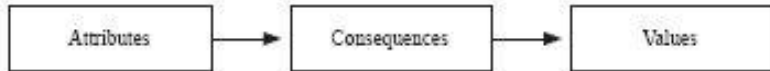
The Means-End Chain (MEC) model has a long research history. Gutman (1982) first introduced the concept, with a focus on qualitative in-depth understanding of consumer motives. This qualitative approach was used to identify and represent the content and structures of consumer models for products and brands. Reynolds and Gutman (1988)) made the MEC model well-accepted by providing a hands-on description of how to conduct, analyse and use MEC interviews (Weijters & Muylle, 2008). Kaciak and Cullen (2006) asserted that the MEC has been a popular and ever-evolving research domain since its introduction. Gutman’s (1982) MEC theory was inspired by research from Rokeach (1968) and Yankelovich (1981), who showed that values direct people’s behaviour in all aspects of their lives (Boer & McCarthy, 2004). Although the original purpose of the MEC was for linking consumers’ values to their choice behaviours in marketing and consumer research, it is becoming popular in other areas (Tania et al., 2006) like architecture, urban design, advertising, information technology, and organisational management (Rugg et al., 2002).

Gutman (1982) defined MEC as a model that seeks to explain how a product or service selection facilitates the achievement of the desired end states. MEC links sequentially the products’ attributes (A) to the consequences of the product use (C) and to individuals’ personal values (V). The resultant A-C-V sequence that forms is called the MEC or ladder. The essential idea in MEC theory is that consumers choose the actions which produce the desired consequences and which minimise the undesirable consequences. Meesters (2005) posited that in order to make the right choice between the different goods with

different consequences, the consumer must learn which goods possess the attributes producing the desirable consequence.

### **Conceptual Structure of the MEC Model**

The constructs of the original structure of the MEC model (Gutman, 1982) are attributes, consequences and values (Fig. 1). The linkage between values and consequences is of essential importance in the MEC model. Coolen et al. (2002) described the linkages as: firstly, a certain goods which must be consumed or used to realise a desirable consequence; secondly, a link between consequences and the attributes of goods.



**Figure 1: Structure of MEC**  
(Source: Gutman, 1982)

The original MEC model is based on four assumptions. First, it assumes that objectives and values influence choice processes; secondly, it assumes that people can keep track of the enormous diversity of goods by grouping them in sets or classes so as to produce the complexities of choice; thirdly, it assumes that the behaviour of consumers has consequences, although these consequences do not have to be for everybody; and fourthly, it assumes that consumers learn to associate particular consequences with particular behaviours (Gutman, 1982; Coolen & Hoekstra, 2001; Tania et al., 2006).

### **Laddering Technique of the MEC**

The method used for data collection in MEC is known as laddering. It was first introduced in the 1960s by clinical psychologists as a method of understanding people's core values and beliefs (Hawlev, 2009). Various researchers, Tania et al. (2006), Costa et al. (2004), Grunnet and Grunnet (1995), and Reynolds and Gutman (1988), have agreed that the laddering technique was developed by Dennis Hinkle in 1965 (PhD dissertation), as a means of modelling people's belief structures; and the term "laddering" was coined by Bannister and Mair (1968) who extensively used the technique in their research (Zinas & Jusan, 2009; 2010a, b). The method is qualitative in nature – utilising a semi-structured interviewing tool aimed at eliciting responses from respondents' perception on the attribute-consequence-value (A-C-V) elements (Jusan, 2007). Reynolds and Gutman (1988) assessed that laddering involves a tailored interviewing format typified by the "why is that important to you?" question, with the express goal of determining sets of linkages between the key perceptual elements across the range of attributes (A), consequences (C), and values (V). Following the coding step, an implication matrix is generated which serves as a method of bridging the gap between the qualitative and quantitative aspects of the technique. A HVM is then constructed on the basis of the results of the implication matrix. It shows a graphic presentation of all the most frequently mentioned attributes,

consequences, and values, and it consists of a series of nodes, connected by lines, representing the aggregate of the respondents' ladders (Tania et al., 2006).

### ***Housing Preference and Choice***

Housing is a complex and heterogeneous product in its setting; the cognitive structures of housing users for housing attributes are also complex. Choice behaviours for housing attributes are equally complex. Choices are versions of our life expressions. We become versions of who we are based on the different choices that we make (Zinas & Jusan, 2010a). Zinas and Jusan (2010a) further emphasised that preferences and choices are lifetime phenomena, and that every person lives and operates within the framework of choosing from the alternatives of life's endeavours. These choices and preference activities are dynamic in the *modus operandi*.

In a hypothetical or intended housing choice and preference research situation, some other instruments like questionnaires can be employed to elicit the respondents' attributes choice and preference before the laddering interview in MEC can be conducted (Zinas & Jusan, 2010b, 2011). Zinas and Jusan (2010b, 2011) further posited that the conceptual framework of the stated housing preference and housing choice model approach presents a potential for this to be achieved. Adamowicz et al. (1998) assessed that stated models are choice-based approaches and methods of preference elicitation that presents to respondents one or more choice sets of two or more alternatives and asks that they indicate their most preferred alternative. According to Orzechowski (2004), the alternatives of interest can be presented through a questionnaire by paper-and-pencil, while other means of presentation such as multi-media can also be used. He clarified further that the major advantage of this model is that it allows you to measure the preference of choice behaviour for products that do not exist yet (Orzechowski, 2004). Abley (1997) asserted that the data generated from this kind of survey proved far easier to analyse, and allowed greater prediction of market shares. Merino-Castello (2003) outlined two techniques for these approaches as, firstly that consumers are asked to evaluate a series of hypothetical and real products, defined in terms of their features; and secondly that consumers are asked to view a series of competing products and select one or, in some cases, more than one. He posited that these choice-based approaches are based on a more realistic task that consumers perform every day; the task of choosing a product from among a group of competitors.

## **3.0 Methodology**

### **3.1 Elicitation of Housing Attributes**

Eighteen sets of interior finishes attributes were compiled and profiled under three attributes segments of floors, walls and ceilings, in a matrix of a structured questionnaire and

distributed to one hundred and fifty randomly sampled prospective house owners in the city of Yola, Nigeria. This was consistent with the Coolen and Hoekstra (2001) modified method of the MEC for eliciting relevant housing attributes from their respondents. The difference was that Coolen and Hoekstra (2001) used a Repertory or Kelly Grid to present the compiled housing attributes to the respondents as against the questionnaire tool we used. Respondents were requested to select by indicating their choices and preferences of interior finishes for their would-be housing interior spaces. To make informed responses, a supporting demonstration 3D technical model of a one bedroom bungalow house was presented to each of the respondents that are who were not technically inclined, to clarify the technical terms of the interior finishes elements. The questionnaire also contained some other components such as socio-demographic information, desire to build own housing, development stage of proposed housing, and availability to oblige for an interview.

### **3.2 Elicitation of Motivations for Chosen Attributes**

The questionnaires were collated, and a semi-structured interview called laddering was conducted. The laddering, which is a tailored interviewing format using basically a series of directed probes was conducted with fifteen of the respondents who participated in answering the questionnaire earlier, by purposive sampling method. The selection criteria for the fifteen respondents were on four levels: firstly, the desire of the respondent to build own house; secondly, the development stage of the proposed house was below the occupational stage; thirdly, the frequency of the preferred sets of the interior housing finishes; and fourthly, willingness to oblige for an interview.

The laddering interview with each of the respondents was conducted either in the respondent's house or office depending on the respondent's convenience of venue and time. Each of the interviews was digitally voice recorded with a 2-gigabyte MP3 Sony electronic device. The average recorded length of time of the interviews was one hour. These free responses voice recorded interviews were transcribed and content analysed.

### **3.3 Data Analysis**

The quantitative data that resulted were being analysed descriptively using frequency of the choices made, and examining if there was any existing relationship between the choices and the other variables responded to. Table 1 shows the percentages of the cumulative Floor finish frequency of preferences made by the respondents.

It should be noted that only the motivations for the Ceramic Tiles Floor finishes choices and preferences are presented in this paper.

The qualitative laddering interview data in the MEC were processed manually. The analysis was conducted using the Content Analysis tool. The voice recorded data were transcribed into a written textual format. The basic elements were identified and categorised into attributes, consequences or values from the transcribed data. "Ladders" were constructed from these identified and categorised raw data. The analysis was performed using the traditional MEC method (Reynolds & Gutman, 1988) and the modified methods of

Jusar (2007) and Coolen and Hoekstra (2001). The basic elements of analysis were “word”, or “sense of sentences”, or “phrases”. For the purpose of this paper, only the elements for the abstract attribute “easy to clean/maintain” of ceramic tiles floor finish were herein coded and presented. The coding of the elements was into fourteen content codes, ranging from 01 to 14 as presented in Table 2.

Table 1: Frequency of floor finishes preference

S/No	Housing Space Floor Finishes Type	Percentage of Frequency of Preference (%)
1.	Ceramic Tiles	71.95
2.	PVC Tiles	4.19
3.	Plywood	0.57
4.	Cement-Sand Screed	8.22
5.	Terrazzo	4.00
6.	Stone	038
7.	Marble	10.69
Total		100

Table 2: Summary of content codes for ceramic tiles floor finishes

Code	Content Elements	Code	Content Elements
Attributes		Values cont'd	
01	Easy to Clean/maintain	07	Satisfaction
Consequences		08	Comfort
02	Have healthy environment	09	Godly heritage/prestige
03	Have appealing environment	10	Enjoying Life
04	Conservation of resources	11	Role model
05	Maintenance attitude	12	Accomplishment
Values		13	Self-confidence
06	Healthy life	14	Fulfilment

#### 4.0 Results And Discussions

The next step was to generate an implication matrix, but for the purpose of this paper only a summary of the frequency of the mentioned elements linking them to the abstract attribute ‘easy to clean’ of the ceramic tiles floor finish as presented in Table 3 was generated.

The findings showed that about 72% (Table 1) of the prospective house owners preferred the finishing of the entire housing floor space cumulative area to be ceramic tiles while the least preferred floor finishes was stone. Several reasons were advanced for this preference; the main reason among these factors was that the ceramic tiled floor was ‘easy to clean or maintain’. Several motivational factors (both benefits and personal values) were also linked to this abstract attributes of ‘easy to clean/maintain’ as categorised and coded in Table 2.

Table 3: Summary of the frequency of the mentioned elements linking 'Easy to Clean' attributes of ceramic tiles floor finishes

Code	Content Elements	Frequency of Linkages	Code	Content Elements	Frequency of Linkages
Attributes			Values cont'd		
01	Easy to clean/maintain	15.00 (15)	07	Satisfaction	00.04 (04)
Consequences			08	Comfort	00.04 (04)
02	Have healthy environment	19.18 (39)	09	Godly heritage/prestige	00.05 (05)
03	Have appealing environment	13.07 (20)	10	Enjoying life	00.04 (04)
04	Conservation of resources	12.15 (27)	11	Role model	00.06 (06)
05	Maintenance attitude	08.01 (09)	12	Accomplishment	00.08 (08)
Values			13	Self-confidence	00.01 (01)
06	Healthy life	00.09 (09)	14	Fulfilment	00.02 (02)

In Table 3, the frequencies of the linkages of elements as related to 'easy to clean' attribute of ceramic tiled floor finish within a given category are shown. The numbers indicated the direct and indirect linkages of the elements to the attribute 'easy to clean'. The numbers to the left of the decimal point were direct linkages, while the numbers to the right of the decimal point were the indirect linkages. For example, 19.18 indicated for the code 02 (healthy environment) implied that nineteen (19) elements were mentioned by the respondents linking 'easy to clean' of the ceramic floor finish directly to engender a healthy environment, while eighteen (18) elements were mentioned indirectly to link 'easy to clean' attribute with healthy environment. The numbers in parenthesis were the total of the frequency of mentioned of the elements linking the attribute 'easy to clean' of the ceramic floor finish. Within this category (code 02), motivational factors such as "eliminates sickness prone environment; dirt does not hide; germs will not easily hide; can't enhance germs infestation; eliminates enhancement of diseases; eliminates breeding for mosquitoes and flies; no unnecessary odours; removes cleaning discomforts; eliminates diseases prone environment; guarantees a healthy environment" were amongst the other factors which were linked to this attribute.

This spectrum of motivational factors comprised majorly of everyday activities and concerns, which Lindberg et al. (1987) found to be the main intervening factors between values and preferences for housing attributes. The results depicted that for the abstract attribute, "easy to clean", the interviewees mentioned the desire to have a healthy environment and an appealing environment as the motivation more than for any other motivation. They reasoned that having a healthy environment will generate and enhance the health status of the family, which will translate to not being sick and save of resources that would have been otherwise spent on medication. One respondent captured it in this following way:

*"... health is wealth; healthy living environment can promote long life, promote productivity, it makes you more productive; you become more fulfilled. It produces self-esteem, confidence; you are not afraid to aim higher in life. It makes you more daring for pursuing other goals and dreams".*

Choosing and preferring housing interior finishes materials that promote a healthy environment and engender a healthy life as a terminal value; is of utmost significance to the prospective house owners in Nigeria. The value orientation of the respondents from the hedonic value domain was minimal, such as "enjoying life and comfort" which were linked to this particular attribute. Furthermore, some other motivational values have been advanced as the reasons for the preference of this attribute. The strongest among them was the motivation to accomplish more in life. They linked the ease of cleaning the ceramic tiles to saving energy, time, and money; which will be channelled to other areas of life's endeavours which will make them achieve and accomplish more in life.

## 5.0 Conclusion

In summary, it is obvious that people preferred to finish their houses with materials that will make them to have an easy life orientation from the point of view of maintaining the house with minimal costs. They preferred materials that will have an appealing and appreciative environment that will make them feel fulfilled in life. Everybody will prefer to live in a healthy environment that promotes the health status of those living with him. This makes for a health security scheme in the housing environment. The cumulative impact of this is the maximisation of person-environment congruence (PEC), which will minimise and reduce the risks of housing design failing the test of use. It is our humble view that there exist huge research potentials in the area of housing interior space quality, and the reasons for house owners to prefer a set of interior finishes for their housing spaces. Most researches conducted dwelled more in the area of housing spatial configuration and housing location. A lot of research has yet to be done in the area of housing interior finishing, which puts more quality to the spatial orientations being studied and of course housing design proposals for interior finishes that promote cleanliness of the housing environment.

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