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Consumer preferences on the choice of flooring material for residential buildings in Hyderabad city

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Abstract

Flooring is an important part of the building to ensure foot comfort and it is influenced by the choice made by the users. This study was taken up on 100 residential dwellings in Hyderabad city to investigate the material preferred by the consumers for use in the residential building in different income groups covering 50 of each independent houses and apartments built and occupied in the last ten years. Flooring materials in vogue in urban homes were Vitrified tiles, Marble, Mosaic tiles, Granite, Stone, Ceramic Tiles and Terrazzo. The most preferred flooring material irrespective of the income group for most of the rooms was Vitrified Tiles. It was found that majority of the upper income group choose marble, mosaic and granite flooring. Consumers preference to flooring materials were focused on durability (93%), availability of material in different colors and designs (91%) visual appeal to eye (84%) and ease of maintenance(73%), while the crucial factors like slip and stain resistance and abrasion resistant were paid less attention in the material selection. Majority of the consumers preferred light colors, smooth textures and even patterns for the flooring. The results revealed that aesthetic and functional quality of the material played an important role in the selection process of the flooring material.

Keywords: Residential flooring, Flooring material, Consumer preferences, Foot comfort.

1. Introduction

The décor of the house discovers a novel expression when the choice of flooring material is fitting and blends with other interior parts of the building while providing good foot comfort. Flooring, apart from exhibiting pleasing appearance, attracts the attention of the visitor who enters the dwelling. According to Dee (2003) ^[2] there are endless options for residential flooring. Before purchasing, it is important to consider all the possibilities and select the one that will fit the room, the budget, and the taste of the homeowner. In view of Marcus Co-founder of Home Depot, USA (2000) ^[3] one should consider Traffic, Durability & Performance, Safety, Comfort, Style, Water, Moisture, and Noise before selecting flooring material. Piper (2005) ^[6] says that the first consideration in selecting a flooring type is the intensity of the traffic to which the flooring would be exposed to, followed by durability and cost of cleaning.

The choice of flooring used within the various areas of a residential building is probably one of the most important factors in preventing slip-and-fall accidents. Many factors go into the selection of flooring material like cost, aesthetics, maintenance needs, functionality etc. Keeping these factors in mind, one should take time to thoroughly evaluate the advantages and disadvantages of each type of flooring material, whether it is the existing material or new material to be used in a new facility or in a renovation project. This study was taken up to explore the consumer preferences in the choice of flooring material in selected residential buildings of Hyderabad city.

2. Methodology

The present study was taken up in Hyderabad city as it has attracted new housing development in the past two decades due to increase in job opportunities and increase in affordable population. An exploratory research design was adopted for this research to gain a familiarity and to acquire a new insight into the existing aspects of flooring material in the residential buildings and also to investigate the problems faced with the users with the selected flooring option.

Simple Random Sampling (SRS) Technique was adopted for selecting the sample in such a way that all individuals in the defined population have an equal and independent chance of being selected for the sample. (Moore *et al.* 2006) ^[4]

A total of ten residential areas under GHMC purview located in East, West, North, South and Central zone were identified. A total sample of 100 residential buildings were selected to explore the consumer preferences and problems faced by them. An interview schedule cum observation sheet was developed and pre-tested in 10 houses to validate the schedule. Finalized schedule was used for collecting information. The data was collected, tabulated and analyzed with appropriate statistical tests.

3. Results and discussion

From the analysis of the data it was found that twenty seven per cent (27%) of the respondents were less than 35 years and 59 per cent were in the age group of 35-45 and 45-55 years respectively and fourteen per cent of the respondents were above 55 years. With respect to education it was found that thirty three per cent (33%) of the respondents were graduates and forty three per cent (43%) were post graduates and the remaining 24 per cent (24%) have attained schooling or were intermediate pass outs. Sample was categorized into middle income, upper middle income and higher income

slabs as suggested by Maharashtra Housing and Development Authority (MHADA). It was found that majority of the respondents (51%) belonged to middle income group with monthly income ranging between Rs 30,001/- to Rs 46,000/-. Thirty eight per cent (38%) belonged to upper middle income group with their monthly income ranging from Rs 46,001/- to Rs 62,000/- and only 11% of the respondents belonged to higher income group with monthly income of more than Rs 62,000/-.

Information on user's opinion on the criteria for flooring selection was explored; it was found that decision regarding the flooring material was taken by family in 54 per cent of the sample while it was of the builder who decided the flooring material in 35 percent cases. Comparison of data between the independent houses and apartments revealed that in independent houses family decision was predominant among 78 per cent and in the case of apartments; it was builder's decisions among 64 per cent of the sample. From the analysis it was found that family member's involvement in decision was higher in independent houses and in apartments; builders had influence on flooring material decision. Regarding the preference of flooring material in different income groups, the data was tabulated and presented in Table 1.

Table 1: Preference of Flooring Material in different income groups

S. No	Material	Income group			Total (N=100)
		Middle (n=51)	Upper Middle (n=38)	Upper (n=11)	
1	Marble	9(28) (18)	15(47) (39)	8(25) (73)	32 (100) (32)
2	Vitrified tiles	48(50) (94)	36(38) (95)	11(12) (100)	95(100) (95)
3	Mosaic tiles	15(48) (29)	10(32) (26)	6(19) (55)	31(100) (31)
4	Granite	3(43) (6)	0(0) (0)	4(57) (36)	7(100) (7)
5	Slate Stone	4(36) (8)	7(63) (18)	0(0) (0)	11(100) (11)
6	Ceramic Tiles	1(20) (2)	2(40) (5)	2(40) (18)	5(100) (5)
7	Terrazzo	0(0) (0)	0(0) (0)	1(100) (9)	1(100)(1)

The values represented in table shows multiple responses

Figure in parenthesis beside the number depicts the row wise percentages

Figure in parenthesis below the number depicts the column percentages

Regarding the choices of flooring material in the residential buildings it can be observed that the choices of materials were marble, vitrified tiles, mosaic tiles, ceramic, granite, stone flooring and terrazzo. The most favored option was vitrified tiles (95%) irrespective of the residential building. Marble stone (32%) and mosaic tiles (31%) were almost equally preferred in both the independent houses and apartment homes. Less than 11 per cent of the sample used stone slabs, ceramic tiles and granite. An interesting observation was that locally quarried polished sheet stone was preferred by middle and upper middle income group and the varieties preferred were Bethamcherla (6%), shabad (3%), tandoor (1%), kadapa (1%) and this may be due to importance attached to durability, affordability and ease of maintenance. Reasons for selection for different flooring materials were explored. The data pertaining to the reasons for selection of different flooring material by the respondents is presented in Table.2

Table 2 reveals that Consumers preference to flooring materials were focused on durability(93%), availability of material in different colors and designs (91%) visual appeal to eye (84%) and ease of maintenance(73%), while the

crucial factors like slip and stain resistance and abrasion resistant were paid less attention in the material selection. Vitrified tile was the most preferred flooring material by the respective residential buildings, because of durability and its availability in many colors. Marble flooring was selected due to its durability (97%) and for aesthetic nature. Mosaic tiles were highly preferred due to its aesthetic appeal followed by durability, affordability and its slip resistant nature. Granite tiles and Ceramic tile were preferred for its artistic and visual demand, and an equal proportion of the sample preferred granite flooring due to its affordability, durability and non slippery nature. Stone flooring was found to hold the attention of consumers as it was highly durable nature, requires low maintenance and less importance was paid to appearance and Beauty.

Regarding the flooring material selection by aesthetic characters (Table 3) it can be observed that Aesthetic characters of any flooring are the artistic or the visual appeal of the flooring. Table below indicates the aesthetic characters of flooring like color of the material, Texture/Finish of the material and material laying pattern were explored

Table 2: Distribution of sample by functional characteristics of flooring material N=100

Material	Reasons							
	Affordable	Low maintenance	Durable	Non slippery	Stain Resistance	Scratch Resistant	Available in colors & designs	Beauty/ Aesthetic
Marble (n=31)	15 (16)	21 (68)	30 (97)	19(61)	4 (13)	12 (39)	20 (64)	27 (87)
Vitrified tiles (n=97)	48 (50)	79 (81)	92 (95)	60 (62)	40 (43)	32 (34)	97 (100)	83 (85)
Mosaic tiles (n=34)	27 (80)	18 (53)	27 (80)	26 (77)	12 (35)	12 (35)	34 (100)	26 (77)
Granite (n=7)	4 (57)	3 (43)	4 (57)	4 (57)	3 (43)	1 (14)	7 (100)	5 (71)
Slate Stone (n=10)	5 (50)	7 (70)	8 (80)	4 (40)	3 (30)	2 (20)	3 (30)	4 (40)
Ceramic (n=8)	6 (75)	4 (50)	7 (87)	6 (75)	5 (62)	4 (50)	4 (50)	7 (87)
Terrazzo (n=1)	1 (100)	1 (100)	1 (100)	0 (0)	1 (100)	1 (100)	1 (100)	1 (100)
Total (182)	106 (58)	133 (73)	169 (93)	119 (10)	68 (37)	64 (35)	166 (91)	153 (84)

Figure in parenthesis below the number depicts the column wise percentage and the values are multiple responses

Table 3: Distribution of sample by aesthetic characteristics of flooring material N=100

Material	Aesthetic characters								
	Color of the material			Texture/Finish of the material			Material laying pattern		
	Tint-light & Pale colors	Dark color/ Shade	Neutral / Grayish tone	Smooth	Rough /Coarse	Glossy	Squares tiles evenly laid	Diagonally laid	Any other*
Marble (n=32)	30 (94)	0 (0)	2 (6)	30 (94)	0 (0)	2 (6)	28 (87)	4 (12)	0 (0)
Vitrified (n=95)	56 (59)	32 (34)	7 (7)	72 (76)	0 (0)	23 (24)	95 (100)	0 (0)	0 (0)
Mosaic (n=31)	6 (19)	21 (68)	4 (13)	7 (23)	24 (77)	0 (0)	31 (100)	0 (0)	0 (0)
Granite (n=7)	2 (29)	3 (43)	2 (29)	7 (100)	0 (0)	0 (0)	7 (100)	0 (0)	0 (0)
Stone (n=11)	2 (18)	0 (0)	9 (82)	5 (45)	6 (54)	0 (0)	4 (36)	2 (18)	5 (45)
Terrazzo (n=1)	0 (0)	1 (100)	0 (0)	0 (0)	1 (100)	0 (0)	0 (0)	0 (0)	1 (9)
Ceramic(n=5)	2 (40)	3 (60)	0 (0)	5 (100)	0 (0)	0 (0)	3 (60)	0 (0)	2 (40)
Total 182	98 (53)	60 (32)	24 (13)	142 (78)	31 (17)	25 (13)	168 (92)	6 (3)	8 (4)

Figures in the parenthesis column wise indicate percentages and are multiple responses

* Alternate Dark and light color/ Staggered/ Broken tile pattern

Color of the floor was an important factor for flooring as it reflects and absorbs light. In the present study, colors choice was grouped as tints, shades and neutral colors. From the above table it can be found that majority of the respondents (53%) preferred the lighter and pale colors for the flooring, 32% of the respondents preferred shades (darker colors: like honey brown, brown etc.) and 13% preferred the neutral / grayish tones especially for outdoor flooring in the residential buildings. Marble floors were selected by 94 per cent of the respondents due to pale color. When considering the texture/finish of the floor tile it can be observed that 78% preferred smooth texture/finish of the flooring, while 17% preferred flooring for its rough/coarse texture and 13% preferred the flooring because of its glossy finish and regarding the laying method of the floor tile it was found that majority (92%) of the sample preferred evenly laid squares as the most preferred laying method, 3 per cent preferred diagonally laid method/pattern in the flooring, 4% preferred other laying patterns like alternate dark and light colored tile pattern, staggered and broken tile laying method.

From this table it can be inferred that, aesthetic consideration played a very important in the selection of materials. Light colors, smooth textures and square, even patterns flooring were highly preferred by larger percentage of the sample

4. Conclusion

Flooring is an important surface of any building as it takes greater wear & tear and provides adequate foot comfort. Making a right choice of flooring materials within available marketing options is a challenge for the consumers. There are various factors that influence the choice. Current study indicates that majority of the consumer's preferred vitrified tiles irrespective of the area in both independent houses and apartments. Characteristics like durability, availability of material in different colors and designs and its visual appeal to eye and ease of maintenance were more functional reasons

influencing than slip and stain resistance and abrasion resistance. It can be inferred from this study that that consumer are less conscious of human comfort and safety. Improper selection of materials for wet and dry areas of the house, can result in slip, trip or fall. Hence, there is a need to create awareness on the right methodology for selection of material for different parts of the building.

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