



## SPACE MANAGEMENT TECHNIQUES: A CASE STUDY OF RESIDENTIAL FLATS IN NAGPUR CITY

**Avanti Sanjay Chaphale<sup>1</sup> & Vandana Dhawad<sup>2</sup>**

<sup>1</sup> Temporary Lecturer, Post Graduate Teaching Department of Home Science, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur.

<sup>2</sup> Associate Professor (Resource Management)

Post Graduate Teaching Department of Home Science, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur  
Email ID: mesaphire@gmail.com

### ABSTRACT

The home is often viewed as an unproblematic location in which new occupational roles, relationships and uses can be fitted. The unavailability of decent housing is more pronounced in developing countries where rapid rate of population growth and urbanization is unmatched by corresponding and commensurate change in social, economic and technological development. The number of housing units is limited by some factors which include high cost of land, insufficient funds, and improper management. Thus, the available spaces around us must be judiciously used. If, things are not properly organized and managed it can be very fatiguing, monotonous as well as frustrating. Especially for the homemaker; be it working or non-working women they are the ones who manage the household chores. The role of the architects and interior designers is thus very crucial in designing and planning a space judiciously. The aim of study is to study the use of space through management techniques used in the flats and the problems faced by the homemakers in managing space efficiently. A sample of 15 flats [3 categories of 5 units each i.e. 1-BHK, 2-BHK, 3-BHK] in Nagpur city Of Maharashtra State. The areas in Nagpur city were selected through Purposive-Random sampling. Questionnaire-cum-interview method and Survey-cum-observation method were used for data collection. The study focussed on the use of space management techniques Multi-utility furniture/ Convertible furniture/ Transformable furniture, Use of Organizers, Cabinet/Wardrobe/Almirah storage, Easy “Do It Yourself” organizations in the flats. The data analysed showed that space is improperly and insufficiently utilized in the flats the adoption of space management techniques is poor. Our study reveals the problems faced by the homemakers and the opinions of the architects in managing space and storage efficiently. Proper utilization of space and efficient space management lead to a healthy homemaker and a healthy home environment.

**Keywords:** Space, Space Management, Homemakers, Insufficient Storage, Improper Space Management.



## INTRODUCTION

Nagpur is one of the 36 districts in Maharashtra state. It covers 19,821 m<sup>2</sup> [51,336km]. As of the 2011 census, Nagpur District comprising 14 Tahsils had a population of 46, 53,171 and Nagpur city had a population of 24, 05,421 and the urban agglomeration had a population of 25,23,911. Out of the total District population for 2011 census, 68.30 % lives in urban regions of district. (Census of India 2011)

As the land resource is limited and depleting day by day but the population is expected to increase with each one demanding the best of the facilities, amenities and their rights, so, to accommodate and make arrangement of housing for this huge population, it is necessary to wisely and efficiently use the space available.

The idea of constructing house was borrowed from the birds and animals. Housing besides satisfying one of the basic amenities or necessities, is an economic activity and plays a

significant role in the socio-psychological development of the individual. A home is the biggest investment most families ever make, as cloths cover the individual, so the home clothes the family. In a very real sense, a house is what the family makes it. A house must satisfy economical, psychological, and social needs as well. This has resulted in complex architecture today.

Successful housing needs the provision of adequate storage facilities throughout the various parts of the house. Good storage facility is needed for the following reasons:

- i. Avoids unnecessary waste of time and energy.
- ii. Gives a neat and orderly background for a family living.
- iii. To have easy access to things.
- iv. To have maximum use of space allotted.
- v. To preserve and protect the things against mice, flies, ants etc.
- vi. To keep things away from dust, sunlight, moisture,



obnoxious gases and adverse temperature.

- vii. To prevent pilferages.
- viii. To keep things out of reach of children ( Rani N,et.al,2005)

### **IMPORTANCE OF SPACE MANAGEMENT**

The home is often viewed as an unproblematic location in which new occupational roles, relationships and uses can be fitted. There has been a marked increase in home-based work, leisure and medical care. How these functions can be accommodated within houses designed for conventional domestic and household activities often remains unclear. (Steward B, 2015)

Organization is the key to **effective space management** at your home. Staying organized is not easy, to understand the value of efficient storage solutions can make the difference between a haphazard home and an orderly masterpiece. Finding extra storage in any room involves a touch of creativity, especially when a growing segment of consumers are opting for smaller living spaces.

Creatively maximizing floor-to-ceiling wall space optimizes and effectively increases the space efficiency and design aesthetics of the home. (Closetmaidpro)

The unavailability of decent housing is more pronounced in developing countries where rapid rate of population growth and urbanization is unmatched by corresponding and commensurate change in social, economic and technological development. The number of housing units is limited by some factors which include high cost of land, insufficient funds, and improper management. Adequate and affordable housing and infrastructure are in short supply in most cases. While the task of housing the nation rest squarely on the shoulder of the government, the individual and the private sector, most of the available spaces around us must be judiciously used.

When storage space concerns, it can benefit from looking at two different but related elements of space utilization, specifically



- i. The storage capacity of the house itself, that is directly a function of the physical aspects of the layout, the area of the house, the storage methods, the types of storage aids, etc.; and
- ii. How well the storage capacity is being utilized, that is directly a result of how these resources are managed.

A few techniques can be used to efficiently use space, properly organize the house and optimize the storage. They are as follows:

1. Multi-utility furniture/  
Convertible furniture/  
Transformable furniture
2. Use of Organizers
3. Cabinet/Wardrobe/Almirah storage,
4. Easy “Do It Yourself” organizations

These techniques if used in accordance with the space available, creates a holy abode which is free from clutter, free from odour, high in Illuminance, aesthetically appealing, creative, organized, each thing has a place of its own and moreover free from

the tiny scuffles that happen in the house related to the clutter and the belongings are scattered around the house.

### **PURPOSE OF THE STUDY**

Today every human being desires of having a lavish lifestyle in his/her budget and adapt the modular way of designing their homes. Space is less but the list of demands for designing is more. In the absence of proper space management practices in house, the belongings are scattered around the house and the storage is insufficient. Because of this the house looks a mess and gives an unpleasant appeal and is unrelaxing. Hence, keeping all this in mind, the present study concentrated only on the space management techniques used in the flats.

### **OBJECTIVES**

1. Socio-economic status of the homemaker
2. Apartment details and Space management techniques used in the flats



3. Problems faced due to the improper use of space in the house.
4. Opinions of the homemakers regarding space management in their flats.

### **METHODOLOGY**

A systematic procedure was adopted for the study and therefore methodology given was followed, the present study was conducted in 5 flats in Nagpur city Of Maharashtra State. For the present case study: Purposive-Random sampling was done. The samples were Home-makers of 15 flats (5 units=1-BHK, 5 units= 2-BHK, 5 units=3-BHK).

Primary data was collected through Survey -cum-Observation Method. For survey, Questionnaire-cum-interview method was done. Secondary data was collected from books, journals, and Sanctioned plans of apartments. A questionnaire-cum-interview format was prepared to know the socio-economic status of the home maker to co-relate it with the techniques used to manage space efficiently in the house and

also to understand the built of the apartment as to when it was constructed, whether any renovations have been done or not, etc. and their opinions and problems faced due to inefficient space management. The homemakers were asked to fill the format but, if they weren't able to then interview was conducted and the opinions were noted down by the interviewee. Secondly, the floor area of the house and each room of the house was measured and noted, and the four techniques for space management viz. Multi-utility furniture/ Convertible furniture/ Transformable furniture, Use of Organizers, Cabinet/ closet storage, Easy "Do It Yourself" organization techniques used to manage space were used or not was observed and noted down and photographic evidences were collected accordingly. The data was analysed and depicted graphically.

The data was analysed and interpreted by using statistical tools like frequency and percentage. Graphical



representation with bar diagram and pie charts was adopted in the present study. Format given in table 1 was used to interpret the data-

## **RESULT & DISCUSSION**

### **Socio-economic status**

The information about the socio economic status of the respondents concludes that the majority of the homemakers were of the age between 41-45years, majority of them were graduates and majority of the home makers were unemployed. These criterias of socio economic status influences the knowledge, selection of interior design and furniture and the adaptability to new approaches, which influences the techniques used to manage space in the house. As working women get to socialize more, young minds adapt to change quickly as compared to the older women and also the qualified women are more adaptable to newer techniques and hence understand the importance of efficient space utilization and the techniques used.

66.7% respondents had three members in the family. The size of the family influences the management of space; if the number of members is more than the number of rooms for them then it is a huge problem to manage the space requirements and storage requirements, similarly, too large a home and too small the size of the family then there is found a wastage and inefficiency of space utilization on the house. Hence there should be a balance.

33.33% respondents had their annual income of the family as (a) Rs.30,000-Rs.60,000/- (b) Rs.60,000-Rs.90,000 and (c) Rs.90,000 and above. The income of the respondents influence the knowledge, selection of interior design, adaptability which influences the techniques used to manage space in the house. It was observed that, the respondents having annual income as Rs.30,000-Rs.60,000/- find it difficult to manage space efficiently as compared to those having annual income above Rs.90,000/-



as they cannot afford buying expensive furniture and different items available in the market to reduce storage problems.

### **Apartment details and Space management techniques used in the house**

46.7% houses measured 500-750sq.ft, 33.33% of the houses measured 1100-1400 sq.ft and 20% houses measured 800-1000 sq.ft. The area of the house affects the designing aspect as well as the utilization of space in the house. A small house designed according to the family size, their income and their needs is manageable but inappropriately designed huge house shows wastage of space and storage and is difficult to manage and maintain.

40 % of the flats were constructed in the years 1991-2000 as well as in 2001-2010. 13.33 % flats were constructed before 1980 and 6.7% flats were constructed in 1981-1990. Newly constructed homes focus mainly on the efficient space management and storage facilities whereas the old constructions showed not

much focus on efficient space and storage planning. 66.7% respondents are residing in their flats in 2001-2010, 20% respondents are residing in their flats in 1991-2000 and 13.3% respondents are residing in their flats in 1981-1990.

66.7% of the respondents have carried out renovations in their apartments. 46.7% respondents have carried out renovations of their entire flat, 20% of the respondents have carried out renovations in their kitchens. 40 % of the respondents carried out renovations in their flat in the year 2011-2020 and 6.7 % of the respondents carried out renovations in their flat in the years 1981-1990 and 1991-2000 each.

93.33% respondents have cabinet storage facility in their flat to manage space efficiently and for sufficient storage space. 40% used organizers to manage space efficiently and for sufficient storage space. 33.33 % adapted multi-utility furniture to manage space efficiently and for sufficient storage



space and 20 % carried out “Easy do it yourself “organization techniques to manage space efficiently and for sufficient storage space.

It was observed that all the flats owned by the respondents. Ownership influences the knowledge, selection of interior design, adaptability which influences the techniques used to manage space in the house as no major changes can be made in a rented house whereas when a house is owned it can renovated, reconstructed anytime in any way possible.

#### **Opinions of home-makers regarding space management in their flats**

66.7% of the respondents are comfortable with utilization of the space and the find sufficient storage space in their flat. Out of the 33.33% the respondents who are not comfortable with utilization of the space and the find insufficient storage space in their flat; 46.7 % respondents find insufficient storage and improper space management in the kitchen, 40% of the respondents in the

bedroom and 6.7 % in the living room as well as the toilet.

#### **Problems faced due to the improper use of space in the house**

All the respondents faced and are facing multiple inefficient space management & utilization and insufficient storage related problems. 73.33% respondents faced or are facing the problem of Cluttering of clothes, 66.7% of them are find it fatiguing task to search items,60% of the respondents find their time being wasted in searching the items and valuables, 46.7% are facing the problem of cluttering of utensils, 26.7 % respondents find insufficient circulation space, 13.33% of the respondents face unhygienic condition problem, odour problem and improper arrangement of furniture problem each, 6.7 % respondents find their flats aesthetically dull appearing, find unpleasant atmosphere in the flat and problem of their valuables getting lost.

#### **CONCLUSION**

In the current situation, where there is unavailability of



decent housing because of the rapid rate of population growth and urbanization and commensurate change in social, economic and technological development; the number of housing units is limited by some factors which include high cost of land, insufficient funds, and improper management. Adequate and affordable housing and infrastructure are in short supply. Thus, the available spaces around us must be judiciously used.

Time and energy are limited sources for every human being and hence needs to be utilized wisely. If, things are not properly organized and managed it can be very fatiguing, monotonous as well as frustrating. Especially for the homemaker; be it working or non-working women they are the ones who manage the household chores. And so it is important for them to have their homes properly organized. Proper utilization of space and efficient space management lead to a healthy homemaker and a healthy home environment.

It was observed that, houses were designed mostly on the basis of the respondent's budget, aesthetic appeal and not much importance is given to the handling aspect of the homemaker which later on proves to be tiresome for the homemaker. Respondents opined that, making changes in the house is a huge task which is generally not taken much into consideration as it is time consuming, expenditure increases and also the chaos of the renovation disturbs the routine of the people residing. So it is wise to design the house giving maximum importance to the person managing the home. Also it was observed that the adaptability about space management tools / furniture / techniques was poor with the respondents who had low annual family income as they opined that they can't afford to buy expensive items just to save space and instead they will prefer to buy their daily requirements and manage in the existing situation.



Hence, use of the budget friendly, aesthetically appealing and utility based space management techniques viz. Multi-utility furniture/ Convertible furniture/ Transformable furniture (like sofa-cum-bed, ottomans, convertible dinning, etc.), Organizers, Cabinet/ closet storage and Easy “Do It Yourself” organizations are a helpful aid in

managing space efficiently and providing & utilizing the storage spaces in the house. Successful housing needs the provision of adequate storage facilities throughout the various parts of the house. The role of the architects and interior designers is thus very crucial in designing and planning a space judiciously.

**Table 1: Format used for data interpretation**

SR.NO	SPACE MANGEMENT TECHNIQUES	ROOMS			
		LIVING ROOM	BEDROOM	KITCHEN	TOILET
	Multi-utility/Multi-functional furniture/Convertible Furniture				
	Use of Organizers				
	Cabinet/Wardrobe/Almirah storage				
	Easy “Do It Yourself” organization				
Where, <input checked="" type="checkbox"/> is present and “--” is absent					

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