



SUMMARY AND CONCLUSION

CHAPTER – V

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The housing sector has a noteworthy imbalance in our country. This includes all different people living in luxurious villas, farmhouses, and grand mansions, as well as the ones living in townhouses, row houses, flats, slum houses, tenements, and many more. Few have all the luxuries in their house while few strive hard to have a functional house. People living in townhouses, row houses, flats, and tenements majorly face the issue of small space in their residences. Space is a scarce resource, which is creating a challenge for space planners, designers, architects, construction engineers, as well as city planners to design a functional house in a limited space for the individuals of the country. Effective space planning using advanced technology and making optimum utilization of space are a few important ways to achieve this goal.

The basic problems faced by the homeowners of small space houses are scarcity of space, lack of clearance, and floor space, which imposes designers to utilize whatever is there with thoughtfulness and utmost care. Designing multipurpose furniture can help in the efficient designing of small spaces, as the basic problem of the scarcity of space can be addressed by designing a single piece of furniture that accomplishes more than one purpose. Space-saving furniture helps an individual to achieve multiple goals through one piece of furniture. It saves resources like labour engaged in constructing multiple pieces of furniture and the material cost involved in purchasing raw materials for building various pieces of furniture. Apart from that it also saves time applicable in the construction of the furniture. Apart from this, multipurpose furniture occupies less floor space in comparison to the individual furniture items. The above reasons motivate the users to incline towards the use of multifunctional furniture.

Several studies conducted in India focused on satisfaction experienced by the users of different furniture, designing study tables for hostel girls, design development of residential units, bank interiors, preschool furniture, and children's room furniture, lighting design for residential, electrical design for schools, theme-based restaurant design, and ergonomic assessment of existing furniture design. Thus, the literature collected concluded that various studies focusing on furniture design, furniture

analysis, commercial furniture design, material survey, residential and commercial space planning, and designing, space optimization, and small space designing were conducted but a dearth of studies were found on multipurpose furniture with different material options for small space houses which motivated the researcher to take this less explored area.

The researcher aimed to design multipurpose furniture for small spaces, with the use of a variety of interior materials. The researcher was interested in identifying the problems experienced by homeowners of small houses, related to furniture concerning the foyer, living room, kitchen, dining, bedroom, bathroom, and other areas of the residence. This research is going to be beneficial to the students of the Department of Family and Community Resource Management, as Interior design is one of the specializations offered at the Graduate and Post Graduate level. It will also be beneficial to the students of the Post Graduate Diploma in Hotel Interiors and higher payment program offered in Interior Design specialization. It would also be helpful to professional Architects and Interior Designers for the development of multipurpose furniture in their projects.

The central thought of this research was to identify the problems faced by the residents of the small space houses related to furniture and design of multipurpose furniture, especially for small space houses of Vadodara city, with different material options, and different price ranges, for which furniture was designed for all the areas of the residential unit combining multiple furniture purposes into one unit. The Multipurpose furniture was conceptualized, sketched, and then designed with the help of AutoCAD 2022 and SketchUp 2022. The research also aimed at educating the homeowners of the small spaces regarding the importance of multipurpose furniture along with sharing designs of the proposed furniture options with the respondents of the study and the homeowners of small spaces. The catalogue of proposed designs of multipurpose furniture was designed by the researcher which could be used as a ready reference by the residents of small houses. An intervention program was also conducted to enhance the knowledge of residents of small space houses regarding the use of multipurpose furniture.

STATEMENT OF PROBLEM

The present research aimed to design multi-purpose furniture for small spaces using a combination of Interior materials.

OBJECTIVES

1. To identify the extent of problems faced by the homeowners residing in small houses.
2. To propose designs of multi-purpose furniture using a combination of Interior materials, for small houses.
3. To develop a catalogue of proposed multipurpose furniture with detailed specifications of its construction, materials, and cost.
4. To conduct an intervention program for homeowners to enhance their knowledge regarding multi-purpose furniture, its use, and its benefits in the interiors of small houses.

DELIMITATIONS OF THE STUDY

1. The study was limited to 270 respondents living in small houses in Vadodara city.
2. The built-up area of the respondent's residence considered for research was limited to 600 sq. ft.

METHODOLOGY

For the present study, the descriptive research design was used. An in-depth study of the problems experienced by the residents of the small houses, especially related to furniture, was conducted in the various parts of Vadodara city. A total of 270 houses were selected purposively as samples, from various areas. The sample for the study comprised homeowners residing in small houses. The questionnaire was used for gathering the data. The questionnaire was divided into two sections. Section 1 dealt with the demographic profile of the respondents. Section 2 dealt with extent of the problems regarding existing furniture. The respondents were asked to respond to a 2-point continuum scale in terms of "Experienced" and "Not Experienced". The scores of 2 through 1 were ascribed to each statement, which depicted the extent of the problems faced. To obtain the categories of the extent of the problem faced, the score range was divided on an equal interval basis. The procedure of analysis of the

data comprised categorization, coding, tabulation, and statistical analysis. An intervention program was conducted for the respondents to enhance the knowledge of homeowners regarding multi-purpose furniture. It was delivered in Hindi, Gujarati, and English for better understanding, according to the audience's preference. A question-answer session was conducted at the end with the beneficiaries of the program. A catalogue of the proposed furniture design was shared, which they can use as a ready reference.

MAJOR FINDINGS OF THE STUDY

The major findings of the study are presented underneath:

Section 1: Demographic Profile of the respondents.

It was found that 47.78 per cent of the respondents were graduates. It was observed that 84.07 per cent of the respondents were employed. It was observed that 62.59 per cent of the respondents lived in nuclear families. The data collected, revealed that 68.15 per cent of the respondents had 4 to 7 members in the family. The findings of the study revealed that 62.96 per cent of the respondent's monthly income was between Rs. 10000 to 50000. The findings of the study revealed that 49.26 per cent of the respondents were living in flats or apartments. The data collected revealed that the majority of the respondents (75.19%) were living in a house with a size of 400 sq. ft. to 600 sq. ft. The findings of the current study revealed that 62.96 per cent of the respondents were living for more than seven years in their current house.

Section 2: Extent of problems faced by the respondents residing in small houses.

The findings revealed that 86.67 per cent of the respondents experienced a problem related to insufficient space to store the shoe. 81.85 per cent of the respondents had experienced insufficient space for storage near the TV. The data revealed that 85.56 per cent of respondents had insufficient storage under the kitchen counter. The data showed that 79.26 per cent of the respondents had too less clearance space around the dining table, which acted as a difficulty while serving meals. The data revealed that 81.85 per cent of the respondents'

experienced problems as there were no side table in the Bedroom. The data also states 64.81 per cent of the respondents faced problems due to a lack of overall space in the house. The data further revealed that 70.37 per cent of the respondents were facing high extent of problems related to furniture in the entire house.

The data indicated that the majority (80 %) of the respondents were facing high extent of problems related to furniture in the foyer area. The data revealed that 75.56 per cent of the respondents were facing high extent of problems related to furniture in the living room, 61.11 per cent of the respondents were facing high extent of problems related to furniture in the dining room/dining area 62.59 per cent of the respondents were facing high extent of problems related to furniture in the bedroom, 79.63 per cent of the respondents were facing high extent of problems related to furniture in the bathroom and 70.37 per cent of the respondents were facing high extent of problems related to furniture in the entire house.

Section 3: Proposed designs of multi-purpose furniture using a combination of interior materials, for small houses: The furniture was designed keeping in mind the scarcity of space for optimum utilization of available space for which researcher proposed innovative multipurpose designs for various areas of the residential unit, especially for small houses. The Multipurpose furniture was conceptualized, sketched, and then designed with the help of AutoCAD 2022 and SketchUp 2022, design software. The Furniture for Foyer and Living room consisted of Utility storage with a shoe rack and pull-out seating bench, a Three-seater sofa with a shoe rack, and utility storage. Furniture for the Kitchen and Dining room consisted of a Three-seater sofa cum bed with foldable Four-seater dining (One table and Four chairs), a Portable pre-preparation center with an extendable dining table, chairs, and storage. Furniture for Bedroom, Bathroom, and other areas consisted of a Study unit with dressing and storage, Wardrobe with foldable iron board and study area and chair, Extendable Bed, storage, and folding seating, Folding office and Dressing and Centre Table, storage Chair and bed.

Section 4: A catalogue of proposed designs with detailed specifications, construction detail and cost.

A catalogue was prepared with the proposed designs prepared by the researcher applicable in various small space houses. The catalogue included details of furniture proposed for various spaces, namely the foyer, living room, kitchen, dining room, bedroom, bathroom, and other areas of the house. The construction details, material specifications along with its price were included in it. The catalogue also included material options applicable to various budget groups. This catalogue can be used as a ready reference book by small space owners, to design their small houses smartly and effectively. This can help them organize their home by cost-effectively designing multipurpose furniture.

Section 5: Intervention Program for the respondents to enhance knowledge regarding multi-purpose furniture, its use, and benefits in interiors of small houses.

An intervention program was conducted for the respondents of the study which was focused on enhancing the knowledge of the residents of small spaces regarding the use of multipurpose furniture. The proposed multipurpose designs were discussed in detail with the respondents and a question-answer session was conducted at the end of the program. An overwhelming response was availed and many of the respondents were looking forward to implementing the furniture designs in their residences shortly. The researcher shared the catalogue with the beneficiaries, which they could use as a ready reference to construct the proposed multipurpose furniture for their house.

CONCLUSION

It was observed that respondents experienced various problems related to furniture, in foyer such as insufficient space for storing shoes, size of the shoe-rack was small, uncomfortable height of seating, lack of seating to wear shoes, and lack of clearance space in the foyer which made the researcher to come up with compact utility storage with shoe rack and pull-out seating option applicable in foyer or living room. It was observed that the respondents had insufficient storage under the kitchen counter they faced problems due to lack of space in upper cabinet for storing things. The other

problem faced by the respondents was insufficient space for multiple workers to work together in the kitchen and inappropriate length of the countertop which leads to scarcity of space. Lack of organized upper cabinets in the kitchen was also a problem faced by the respondents. The respondents had too less clearance space around the dining table, which acted as a difficulty while serving meals. They had small size of dining table. The other major problems faced by the respondents was most of them had their dining area combined with living room and had lack of space for extra guests in dining area. Most of the respondents experienced problems as there were no side table in the Bedroom, other major problems was lack of space for additional storage unit in the Bedroom. The respondents also had less space to store seasonal clothes and had no space to accommodate extra members and guests in the bedroom. It was observed that the respondents had no storage inside the bathroom for daily cloths, has no dressing vanity inside the bathroom, and had no space to store extra utility things (like soaps and shampoo) and other utility things.

Thus, the researcher identified the problems experienced by the respondents and came up with various multipurpose furniture design options to address them. The researcher came up with innovative furniture options for various areas of the house. The furniture was designed keeping in mind the various problems identified by the researcher in the study.

IMPLICATIONS OF THE STUDY

- **For the field of Family and Community Resource management**

The proposed designs will be beneficial to the interior design students of BSc, MSc, and students of Post Graduate Diploma in Hotel Interiors in enhancing their knowledge regarding multipurpose furniture.

- **For the homeowners of small space houses**

The furniture options proposed by the researcher can be used by the homeowners of small houses to implement in their houses. The catalogue of proposed designs of multipurpose furniture can be used as a ready reference by the residents of small houses to help solve their furniture-related problems.

- **For the field of Interior Designers and Architects**

The design would be helpful to professional Architects and Interior Designers for the development of multipurpose furniture in their residential projects.

5.4 RECOMMENDATIONS FOR FUTURE STUDIES

1. A similar study can be conducted for commercial spaces.
2. Study of similar nature can be conducted on a larger sample.
3. A study to design environmentally friendly multipurpose furniture can be conducted.
4. A similar study can be conducted to design automated multipurpose furniture.