

## DESIGNING MULTIPURPOSE FURNITURE FOR LIVING ROOM OF SMALL HOUSES

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### Abstract

*Furniture is a necessity and not a luxury, everybody needs. Furniture is generally taking almost 50 % of a normal floorspace. Therefore, living in a small space requires smart and space-saving furniture solutions to maintain the balance between available and used space. Multifunctional furniture goes by several names: multipurpose furniture, space-saving furniture, and transformable furniture. House consists of various areas amongst them the most important area is living room. Living room gives first impression of the entire house to the person entering in the house. Therefore, researcher was interested to find out problems faced by owners of small spaces specifically related to furniture in the living room. The research was conducted by identifying problems related to foyer and living room of small spaces. The sample for the study comprised of 270 residents of small spaces residing in Vadodara city with a built-up area of 600 sq. ft. Findings of the study highlighted the extent of problems faced by the respondents. The researcher suggested multipurpose furniture as a solution for the various problems, which were identified by the researcher. An intervention program was conducted to educate the residents of small spaces regarding the use of multipurpose furniture, who were facing problems related to furniture.*

**Keywords:** *Multipurpose, Furniture, Small spaces, living room*

### Introduction

A house is a place where a person aspires to cherish quality time with family, creates memorable moments and spends most of the part of their life. So, it is very important to design a relaxing, pleasant, and aesthetically appealing house for an individual. Living room is the most important part of the house, because each member of the family spends their common time there, together, moreover guests' friends and relatives who visit their house, spend most of the time in living room. The migration of people is leading to a space crunch, especially in big cities, which is forcing people to reside in small houses where space is less. Scarcity of space forces to utilize the available resource, in an optimum manner and forces to make wise usage of available space. It can be done by designing space-saving furniture, multipurpose furniture, and foldable furniture. Various international brands are selling such furniture items, but designing it in a customized way, considering Indian climatology, needs of people residing in small houses is very necessary. To design such furniture there is a wide range of interior materials available in the market with different peculiarities and benefits. Selecting proper material according to the climatic conditions, care and maintenance is a challenge faced by most people. There are different types of furniture, and each has its unique. Furniture can be a creation of the arrangement and can be designed considering, the function which it fulfils, using different materials with excellent craftsmanship. (Binag & Caranguian, 2015) Multifunctional furniture goes by several names: multipurpose furniture, space-saving furniture, and transformable furniture. As the name suggests, the basic idea of multifunctional furniture is to perform more than one function (Thøgersen, 2019). Numerous variables are required to be considered for planning space-sparing or transformable space saving furniture, the plan of the furniture should be based on the concept of its visual appearance and use (Astonkar & Kherde, 2015).

Each house consists of different rooms, in small houses, the living room is often combined with foyer area. This room is the first area through which the family members or guests enter the house, and so design of living room is considered to be one of the most important aspect in the design of entire house. In the present study problems

faced by the residents of small houses related to furniture in living room were identified by the researcher and an intervention program was conducted to educate the respondents about the use of multipurpose furniture as a solution to optimize the space utilization of the available space to fulfil their needs.

**Objectives:**

1. To study the problems faced by the homeowners residing in small houses related to furniture in Living Room.
2. Proposing furniture for foyer and Living room for respondents residing in small houses.
3. To conduct an intervention program for homeowners to enhance their knowledge regarding multi-purpose furniture in living room, its use and benefits in interiors of small houses.

**Methodology**

The research design was descriptive. An in-depth study of the problems faced by the residents of the small houses especially related to furniture in living room, residing in the various parts of the Vadodara city was conducted. A questionnaire was used to collect the data related to various problems. The locale of the study was 270 small houses from Vadodara city whose built-up area was up to 600 sq. ft. Based on the objectives of the research questionnaire was prepared. While preparing the questionnaire, care was taken to include all such questions that would elicit the information necessary to attain the objectives of the study. The questionnaire had two sections. Section I dealt with the questions regarding the background information of the respondents, which included name, address, phone no, family income, type of house, area of the residential unit, number of family members residing in it, age group of each family member and family income. Section II dealt with the extent of problems faced by the homeowners residing in common areas. This section was further divided into 2 sub-sections. Problems Faced by the homeowners residing in small houses concerning Furniture in Foyer and in Living Room. The respondents were asked to respond to the problems experienced in terms of “Yes” and “No” the scores from 2 through 1 were given to the statements respectively. Further, the data were classified into a range of scores as “high” and “low” extent of problems. The data was analysed using descriptive statistics.

**Findings**

Following results were revealed through the study:

**Section 1- Demographic profile of the respondents:**

This section of the study dealt with background information of the respondents which consisted of education qualification, occupation, type of family, number of family members, composition of the family, monthly family income, type of house, ownership of property, size of house and duration of stay in house.

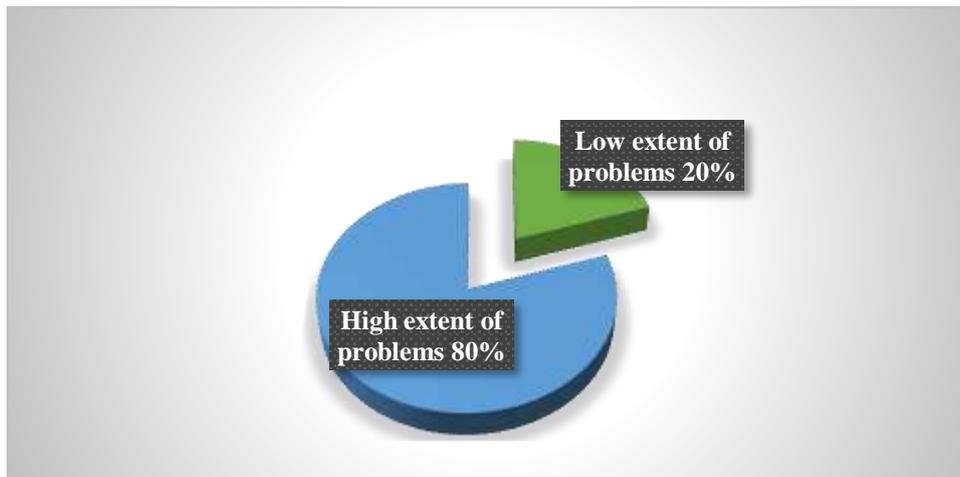
**Section 2- Problems experienced by the respondents related to furniture in the foyer area:** Various parameters such as insufficient space for storing shoes, lack of space for existing shoe rack, insufficient space to store all pairs of shoes, the improper height of the shoe rack which made it inconvenient to sit and wear shoes, lack of space to create a seating arrangement in the foyer and lack of clearance space in the foyer; were considered to identify the problems faced by the respondents living in a small house. The respondents were asked to respond to the problems experienced in terms of “Yes” and “No” the scores from 2 through 1 were given to the statements respectively. Further, the data were classified into a range of scores as “high” and “low” extent of problems.

**Table 1: Distribution of respondents according to the extent of problems faced related to furniture in the foyer area**

Sr. No.	Extent of Problems	Range of Scores	Respondents (n=270)	
			f	%
1	Low	5 – 7	54	20
2	High	8 – 10	216	80

The data revealed that 80 per cent of the respondents were facing high extent of problems related to furniture in the foyer area.

**Graph 1: Percentage distribution of respondents according to the extent of problems faced related to furniture in the foyer area**



**Section 3- Problems experienced by the respondents related to furniture in the Living room:**

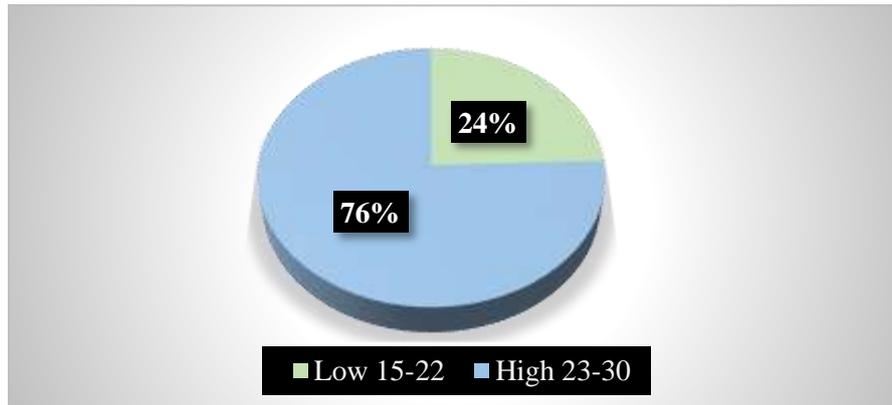
Various parameters considered to identify the problems in small space houses with respect to the living room were; difficulty to bring the furniture inside the house due to small entrance, scarcity of space to accommodate guests in the living room, serving food to the guests becomes difficult due to compact furniture arrangement, lack of clearance space which leads to difficulty in movement, lack of clearance space leading to difficulty in cleaning the room, no TV unit or existing TV unit does not provide enough storage space, the distance between TV and seating arrangement was less, which leads to discomfort in watching TV, lack of enough space to open the cabinet doors and access the inner things from the cabinet, insufficient space to open the furniture drawers and access the stored items, lack of additional storage units in Living room, difficulty in using the centre table from sofa or another seating unit due to congested arrangement, height of Centre table was very low and therefore not comfortable to use, the size of the Centre table was small, to accommodate necessary items, size of Centre table was too big as compared to room size, there was no separate area for storing shoes. The respondents were asked to respond to the problems experienced in terms of “Yes” and “No” the scores from 2 through 1 were given to the statements respectively. Further, the data were classified into a range of scores as “high” and “low” extent of problems.

**Table 2: Distribution of respondents according to the extent of problems faced related to furniture in the living room**

Sr. No.	Extent of Problems	Range of Scores	Respondents (n=270)	
			f	%
1	Low	15-22	66	24.44
2	High	23-30	204	75.56

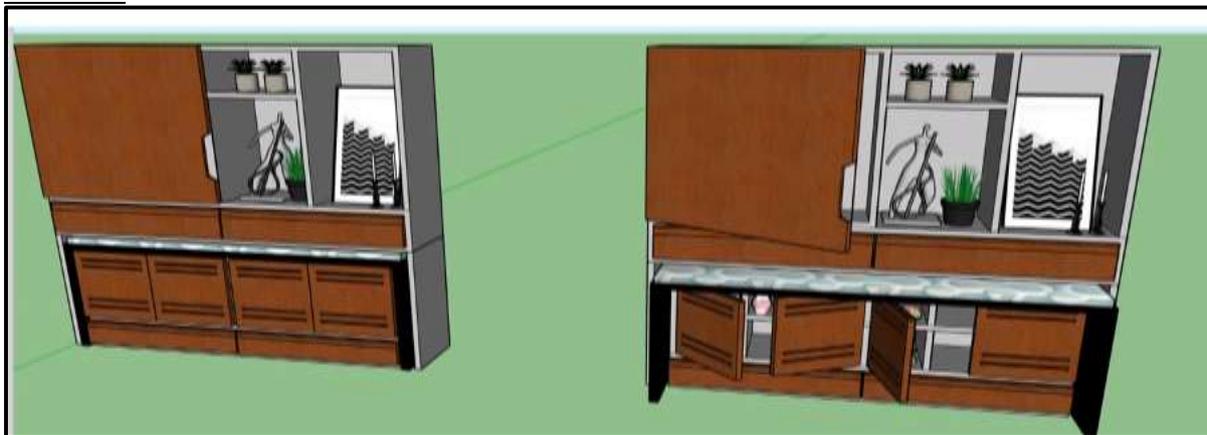
The data revealed that 75.5 per cent of the respondents were facing high extent of problems related to furniture in the living room

**Graph 2: Percentage distribution of respondents according to the extent of problems faced related to furniture in the living room**



**Proposed furniture for the foyer and living room:**

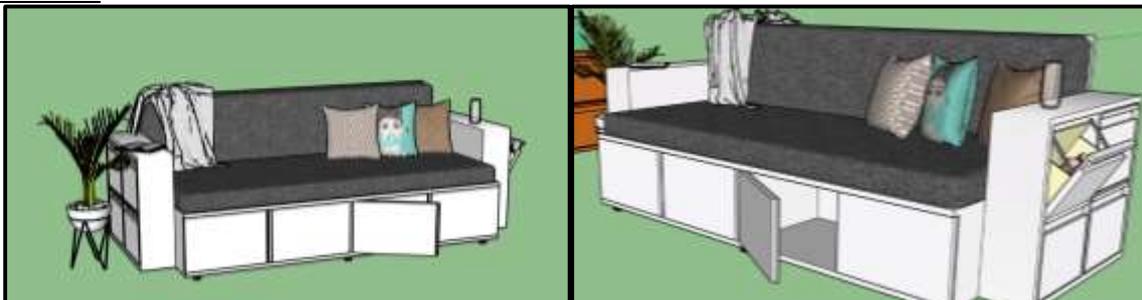
**Furniture 1:**



**Figure 1: Utility storage and shoe rack with pull out bench**

This furniture was designed specially for small houses to conceal the electric meters in the foyer area, and to have a utility storage in the two drawers, which can be used to store keys, watches, wallets, goggles and other things required at first use. Underneath is the shoe rack with the capacity of around 12 pairs designed with pull out bench, which can be pulled out to sit and wear shoes and slide in when not, providing more floor space. The bottom 2 drawers can be used to store read newspapers.

**Furniture 2:**



**Figure 2: 3-seater sofa with storage and shoe rack inside the hand-rest**

This piece of furniture is designed as a 3-seater sofa, providing maximum storage underneath to store extra furnishings, newspapers, magazines, purses in living room; along with the shoe rack designed inside the hand rest of the sofa to store more than 4-8 pairs of shoes.

### An intervention program:

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. An intervention program was delivered in a Hindilanguage for better understanding by the audience. The major focus of the intervention program was to discuss the various design options of space saving, multipurpose furniture for living rooms of small houses, which were cost effective.

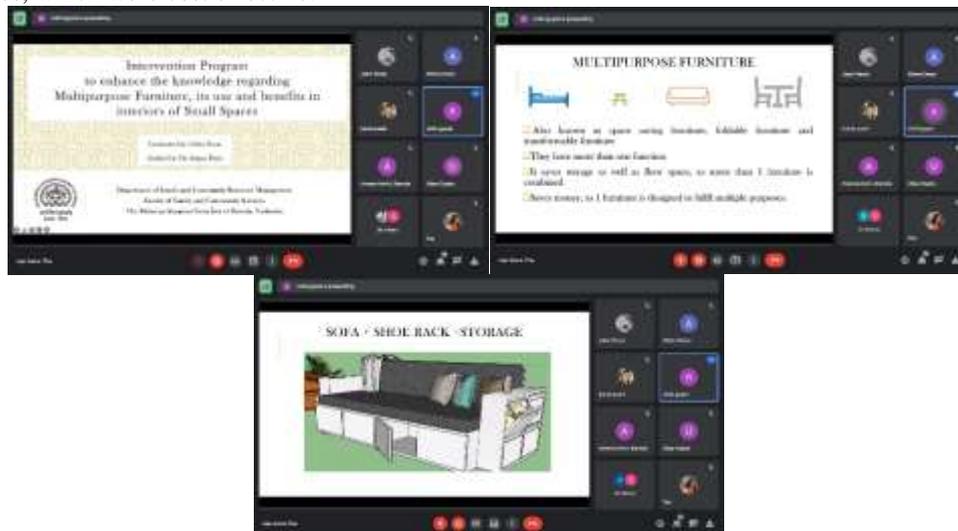


Figure3: Images of Intervention program conducted by the researcher

### Conclusion

The study revealed that the majority (86.6 percent) of the respondents had insufficient space to store the shoes, nearly four fifth of the respondents had small size of shoe rack, 73.3 per cent of the respondents had uncomfortable seat and 71.11 per cent lack of space in foyer and almost 61.11 per cent of the respondents faced the problem of insufficient clearance in the foyer area. And the biggest problem faced by the respondents in the living room was related to storage. 81.85 per cent of the respondents had insufficient space for storage near TV, followed by the congested arrangement leading to difficulty in using centre table from seating unit, which was faced by around 76.30 per cent of the respondents, where as there were 68.89 per cent of the respondents facing the problem of limited storage in living room and were willing to have more storage space and 64.44 per cent of the respondents had lack of space to accommodate guests, 67.41 per cent no separate area to store shoes and 64.44 per cent of the respondents had compact furniture arrangement. To overcome the identified problems. An intervention program was conducted to enhance the knowledge regarding multipurpose furniture its use and benefit in the interiors of small houses. The designs of multipurpose furniture were discussed with the beneficiaries of the intervention program. The designs comprised of utility storage and shoe rack with pull out bench and a 3-seater sofa with storage and shoe rack inside the hand-rest. The furniture was designed keeping in mind the small spaces; hence the dimensions of the furniture were considered as little as possible by the researcher. The Multipurpose furniture was conceptualized, sketched and then designed with the help of AutoCAD and SketchUp, design software.

### References

- Astonkar, D. V., & Kherde, S. M. (2015, September 06). Development in various multipurpose furniture's by using space saving approach. *International Research Journal of Engineering and Technology (IRJET)*, 2(6), 257-264. Retrieved from [www.irjet.net](http://www.irjet.net).
- Binag, N. D., & Caranguian, L. C. (2015, December 12). Design and Fabrication of Power and Space Saving Chattel for Engineers and Engineering Students. *International Journal of Engineering Research & Technology (IJERT)*, 4(12), 516-522.
- Husein, H. A. (2021). Multifunctional Furniture as a Smart Solution for Small Spaces for the Case of Zaniary Towers Apartments in Erbil City, Iraq. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*, 12(1), 12A1H, 1-11. <http://TUENG>.
- India at glance. (2021, July 26). Retrieved from [india.gov.in/india-glance/profile](https://www.india.gov.in/india-glance/profile)
- Levin, H. (n.d.). *Family & Home Living in a Small House – Benefits & Challenges*. Retrieved July 2020, from <https://www.moneycrashers.com/>: <https://www.moneycrashers.com/small-house-living/>

- Post, R. (2014, August 25). *Are tiny houses and micro-apartments the future of urban homes?* Retrieved from <https://www.theguardian.com/>: <https://www.theguardian.com/sustainable-business/2014/aug/25/tiny-houses-micro-living-urban-cities-population-newyork-hongkong-tokyo>
- Swanson, W. (2021). *How Much Land Does It Take To Feed One Person – Online Calculator*. Retrieved from <https://permaculturism.com/>: <https://permaculturism.com/how-much-land-does-it-take-to-feed-one-person/>
- Thøgersen, K. (2019, December 22). *Small spaces need smart solutions Designing furniture for small spaces, in connection with human wellbeing*. Retrieved from <https://www.scribd.com/>: <https://www.scribd.com/document/440628228/Small-Spaces-Need-Smart-Solutions-Kristoffer-Th%C3%B8gersen>
- Wang, S. (2013). *An Analysis of Transformable Space Saving Furniture*. Wood Products Processing, The Faculty of Forestry .