



Status of Floor Building Materials of Female Headed Households in Rural Haryana: A Geographical Analysis

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Abstract

This geographical analysis examines the status of floor building materials in rural Haryana households, specifically focusing on those led by women. The choice of floor building materials is a critical indicator of housing quality and socio-economic conditions. This study aims to provide insights into the disparities and challenges faced by female-headed households in accessing adequate housing infrastructure. We typically think of floor materials as being the cleanest in the building; they can occasionally be self-decorative, but they are typically maintained by a basic framework. The flooring material of a structure offers defence against both natural and man-made issues. Depending on material availability and the type of supporting structure, the top layer of a floor might vary greatly. There are many different types of flooring materials that are commercially accessible, ranging from naturally occurring materials like mud and stone to manufactured materials like tiles and marbles. A supplementary water-resistant material may be placed on top of the floor materials. Therefore, this work aims to investigate the flooring preferences of rural Haryana homes with female heads of family. For this, information from the 2011 Indian census has been gathered. In the majority of houses, the floor is made of cement (38.60%), followed by mud (38.09%), and in the lowest and extremely lowest percentages, stone (5.25%). Cement accounts for more than 50% of floor building in the southern regions of Haryana, whereas stone makes for less than 10%. Rural Haryana's Mahendragarh, Rewari, Gurgaon, and Faridabad districts have the greatest percentage of cement used in floor building.

Keywords: Female-headed households, Pattern, Floor materials,

Introduction

It's important to note that the choice of floor building materials in India is influenced by various factors including climate, economic status, cultural preferences, and regional availability of materials. Government housing schemes, urbanization trends, and increasing disposable incomes have led to a shift towards more modern and durable flooring materials in many parts of the country.



However, disparities in housing quality and materials persist, with rural and economically disadvantaged areas often lagging behind in adopting modern flooring materials. Numerous governmental and non-governmental organizations draw interest in rural female headed households due to their specific characteristics on both a global and national scale. They are also the focus of several development projects at the municipal and regional levels. This is mostly due to two causes. The first is the steady increase in female-headed households as a result of the country of India's current political, economic, social, cultural, and demographic complexity. The second is that, unlike their counterparts, Male Headed Households, who had their difficulties addressed by several legislation, Female Headed Households had been ignored as a single social group of the society for many decades (Macbeth, 1992).

In the research region, a variety of factors influence the development of female-headed households. The main causes of males and females being single include divorce, husbands' deaths, desertion, and never getting married. Male and female singles have uneven chances of finding love again. For instance, males, regardless of whether they have children or not, do not prefer to live alone, making women with children less desirable for marriage. Without a woman's work, a man has very little chance of surviving. Women are therefore often exposed to household leaders (Nicoletti et al., 2002).

In spite of the fact that female-headed households had existed for generations, the culture in the research region nevertheless saw them as defying social standards. One important aspect of creating a house is different types of buildings. In order for the roof's lifespan to be prolonged by its sustainable strength, the major emphasis has always been placed on the material that is strong and durable. The majority of roof building in rural regions is done by homeowners using materials that are readily available in the area. The bulk of the villagers, who come from different social classes in rural society, utilize this material frequently. Utilizing the locally accessible materials also saves money. In India, where there is a lot of climatic and physiographic regional variation in terms of its topography's regional character. The characteristics of the topography and the climate have a direct or indirect impact on the type of material used and the design of the roofs that will be constructed in the various parts of the nation (Lundgren et al., 1999).



The fact that there doesn't seem to be a direct correlation between household headship and incomes, as well as the fact that "women headed households" are not a phenomenon that is overwhelmingly or exclusively present in poor income groups to the relative exclusion of middle- or higher-income groups, is further supported by Chant's (2003) identification of a large number of micro level studies (Chant, 2003).

Historical Background

There isn't a single, universal definition of female-headed households, despite the fact that several meanings have been given to them in various literatures, as is indicated in the literature. Chant provides one definition of Female Headed Households. Chant outlines seven types of female-headed households throughout the globe, along with their traits. In the study, the researcher utilised the definition of female-headed families, which she chose, as "households controlled by a widowed, divorced, or a single woman without the mediation of a husband, father, or male relative" among these features of female-headed households (Chant, 1997).

According to the study region, the community and government sectors did not consistently use and define female headed households, in the researcher's opinion. The meaning and usage of "female headed households" differs depending on the reasons of these households, whereas "female headed households" in the context of government sectors depends on the nature of such sectors.

There are three factors that might explain why female-headed families are less wealthy than their male-headed counterparts, according. First off, compared to other families, those led by women often have more dependents, or a larger ratio of non-workers to employees. Due to gender prejudice, female heads earn less money and have less access to assets and productive resources than males. Last but not least, because of the domestic duties that women perform, they are more time and mobility constrained than males (Buvinic& Gupta (1997).

In the Bombay slum in 1986, Bharat (1986) conducted a study of single-parent households, the majority of whom were widows. She discovered that the family's income level significantly decreased when the male spouse was absent. She said that single moms' mental issues were not always brought on by the absence of their spouses, but rather by the ensuing



socioeconomic difficulties and worry for the future of their children (Bharat, 1986).

Other research revealed that households headed by women had much lower monthly incomes than households headed by males, had far lower levels of education, and owned little to no land. Determine the type of material and the cost of the material that have been affecting the selectivity of the material which have been used for the construction of roofs in the rural areas of the country, keeping in mind a significant regional disparity in the climatic conditions and the regional character of the topographical features. In contrast, the tribal regions of the nation have thatched or grass roofs. It is widely utilized among the people who belong to the tribal areas of Madhya Pradesh, Chhattisgarh, Rajasthan, Odissa, Andhra Pradesh, Karnataka, and Tamil Nadu because of the ease of access to the locally available material and its cost-effectiveness. Assam, Mizoram, Arunachal Pradesh, Tripura, and Meghalaya are states, however, where the amount of yearly rainfall is significantly higher than in other interior or northwestern Indian states. Therefore, the primary emphasis is placed on the water-proofing of the dwellings built in these areas' roofs. Therefore, the concrete is employed to build the roof in these often-damp areas since it is a sturdy and water-resistant material.

Objectives

To determine the pattern of floor of Female headed households by materials, these are the main objectives as under:

- To study the pattern of Mud Building Material in Floor Construction in rural Haryana.
- To study the pattern of Burnt Brick Building Material in Floor Construction in study area
- To examine the pattern of Cement Building Material in Floor Construction in study area
- To study the pattern of Stone Building Material in Floor Construction and any others in study area.

Database and Methodology

The present work is an attempt to study the pattern of building materials in floor construction in female-headed households in rural Haryana based on secondary sources of data. All secondary data are collected from a census of Haryana for 2011. The data



pertaining toin study area have been collected from the HH01 table http://censusindia.gov.in/2011census/hlo/HLO_Tables.html. The main variables on number of mud building material, burnt brick building material, cement building material in floor, stonebuilding material in floor construction and any others. ArcGIS software version 9.3 is also used as a tool to make maps of the variation in floor construction materials of female headed household in rural Haryana.

Result and Analysis

Pattern of Floor Materials

In rural Haryana, women headed homes constructed floors with contemporary building supplies, machinery, and technology. In their work, the Haryanvi aimed to benefit from contemporary tools and materials. Building design, ecology and cultural compatibility were overlooked. Modern building materials were recognizable by their manifestations in families with female heads of household. The way that floor construction materials are distributed. The tabulated data on the various types of materials used by Haryana families reveals a range of percentages that were utilized to build the walls of their individual homes in rural households with female heads of household. When erecting a wall in their own homes, mud makes up a maximum of 38.09 percent of the total building materials. Utilizing cement comes in second with a 38.60% share. In other words, these groups together account for 14.42% of all building materials consumed for floor construction in homes headed by women. Regarding other materials, stone, which accounts for 5.25 percent, and other materials with mortar, which account for 3.64 percent, are used to build floors. As a result, the total amount of material used by homes in rural Haryana with female heads of household was used.

Mud Building Material in Floor Construction

In case of Female Headed Households in Haryana, Mewat has the maximum contribution of concrete in construction of floor that is 64.82 per cent while the Sonipat has the lowest female headed households using these materials in building with 21.38 per cent. Although, there is vast gaze among the district level Burnt Brick materials varies from district-to-district ranges from less than 20 per cent to above 50 per cent. The districts which have mud above 50 per cent are included in the high category. The high level of mud has been used in

the districts of Sirsa, Fatehabad, Yamunanagar, and Mewat districts. These districts are developed and have high income level. The districts which have the stone packed ranges (40.01-50) are included in the high category. The high level of stone packed material was used in the districts of Ambala, Kurukshetra, Kaithal, Karnal, Hisar, and Palwal. The spatial pattern of mud material shows that ranges (30.01-40) are included into the moderate category. The building materials of stone packed was used in the districts of Bhiwani, Panipat, Faridabad, and Jind. Mahendergarh, Rewari, Gurugram, Jhajjar, Rohtak, and Panchkula districts have used the material in building of stone packed per cent ranges (20-30) are included in a low category. There is only one district in this category that is Sonipat.

Table 1: Pattern of Floor Material of Female Headed Households in Rural Haryana, 2011

Categories	Floor Material (In %)
Mud	38.09
Cement	38.60
Burnt Brick	14.42
Stone	05.25
Others	03.64
All Materials	100

Source: Census of India, 2011

Table 2: District-wise distribution of Floor Material in Rural Haryana, 2011

Sr. No.	Districts	Mud	Burnt Brick	Cement	Stone	Any Others
1	Ambala	44.31	4.42	40.80	7.34	3.13
2	Bhiwani	35.30	8.28	47.73	3.76	4.93
3	Faridabad	32.05	3.92	56.12	4.98	2.92
4	Fatehabad	56.39	17.05	20.48	4.60	1.48
5	Gurgaon	21.55	2.92	60.63	7.56	7.35
6	Hisar	45.08	22.52	28.96	2.00	1.44
7	Jhajjar	22.69	18.49	42.07	8.47	8.28
8	Jind	34.11	31.06	29.00	4.07	1.75
9	Kaithal	43.23	20.76	25.39	9.13	1.49
10	Karnal	46.94	12.18	31.40	7.35	2.13
11	Kurukshetra	47.59	5.71	34.39	9.95	2.36
12	Mahendergarh	22.93	0.88	66.12	3.21	6.86
13	Mewat	64.82	2.77	29.78	1.59	1.04



14	Palwal	49.90	4.64	41.14	2.93	1.39
15	Panchkula	28.19	1.51	64.12	3.51	2.68
16	Panipat	32.41	26.77	33.32	5.74	1.75
17	Rewari	22.83	1.88	59.74	5.20	10.36
18	Rohtak	23.82	26.81	39.58	5.86	3.93
19	Sirsa	63.78	17.63	14.92	2.53	1.15
20	Sonipat	21.38	29.98	39.57	6.04	3.03
21	Yamunanagar	59.54	2.75	29.94	5.37	2.41
Haryana		38.08	14.42	38.6	5.25	3.64

Source: Census of India, 2011

Burnt Brick Building Material

According to census (2011) Jind has the maximum contribution of burnt brick in construction of floor that is 31.06 per cent while the Mahendergarh has the lowest female headed households using these materials in building with 0.88 per cent. Although, there is vast gap among the district level burnt brick materials varies from district-to-district ranges from less than 5 per cent to above 20 per cent. The districts which have burnt brick above 20 per cent are included in the high category. The High level of burnt brick has been used in the districts of Hisar, Jind, Kaithal, Panipat, Sonipat, and Rohtak districts. These districts are developed and have high income level. The districts which have the burnt brick ranges (15.01-20) are included in the high category. The high level of burnt brick material was used in the districts of Sirsa, Fatehabad, and Jhajjar. The spatial pattern of burnt brick material shows that ranges (10.01-15) are included into the moderate category. The building materials of burnt brick was used in the district of Karnal, Bhiwani, Kurukshetra districts have used the material in building of Burnt Brick per cent ranges (5-10) are included in a low category. Mahendergarh, Rewari, Gurugram, Faridabad, Mewat, Palwal, Panchkula, Ambala, and Yamunanagar districts have used the lowest material of burnt brick in floor construction of female headed households.

Cement Building Material

The districts which have cement above 50 per cent are included in the high category. The high level of cement has been used in the districts of Mahendergarh, Rewari, Gurugram, Faridabad, and Panchkula districts. The districts which have the cement ranges (40.01-50) are included in the high category. The high level of cement material was used in the districts



of Ambala, Bhiwani, Jhajjar, and Palwal. The spatial pattern of cement material shows that ranges (30.01-40) are included into the moderate category. The building materials of cement was used in the districts of Kurukshetra, Karnal, Panipat, Sonapat, Rohtak Hisar, Fatehabad, Jind, Kaithal, Yamunanagar, Mewat districts have used the material in building of cement per cent ranges (20-30) are included in a low category. Sirsa district only comes under this class.

Stone Building Material

The districts which have cement above 8 per cent are included in the high category. The high level of cement has been used in the districts of Kaithal, Jhajjar, Kurukshetra districts. The districts which have the cement ranges (6.01-8) are included in the high category. The high level of cement material was used in the districts of Ambala, Karnal, Sonapat, and Gurugram. The spatial pattern of cement material shows that ranges (4.01-6) are included into the moderate category. The building materials of cement was used in the districts of Fatehabad, Jind, Rohtak, Rewari, Panipat, Faridabad, and Yamunanagar. Sirsa, Bhiwani, Mahendergarh, Palwal, and Panchkula, districts have used the material in building of cement per cent ranges (2-4) are included in a low category. Hisar, and Mewat districts come under this class.

Conclusion

The material used in the female-headed households in rural Haryana are mud, cement, burnt brick, stone and other. The mud material has been used more than 38 per cent that shows the economic status of the households. The central part of Haryana has used more burnt brick approximately 20 per cent material for constructing floor while southern districts of Haryana has revealed more than 50 per cent use of cement for making floor in female-headed households, which is particularly occupied in Mahendergarh, Rewari, Gurgaon, and Faridabad districts of Haryana. Hisar and Sirsa districts have very low consumption of cement and burnt brick for preparing floor of the house. Kurukshetra, Kaithal, and Jhajjar districts have the highest share of stone material used but less than 10 per cent in Haryana.



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