



ASSESSING THE ROLE OF PRADHAN MANTRI AWAS YOJANA (PMAY)-GRAMIN IN TRANSFORMING RURAL HOUSING AND BASIC AMENITIES: A STUDY OF JAMMU AND DODA DISTRICTS OF J&K UT

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Abstract:

Housing, alongside food and clothing, is a core component of human well-being and a critical determinant of sustainable development. Adequate housing not only supports physical and psychological health but also supports social stability, economic productivity, and environmental sustainability. In the context of the United Nations Sustainable Development Goals (SDGs), particularly Goal 11, which seeks to make cities and human settlements inclusive, safe, resilient, and sustainable, access to secure, affordable, and quality housing is paramount.

In this backdrop, the thrust of the present paper is to evaluate the performance of the Pradhan Mantri Awas Yojana–Gramin (PMAY-G) in advancing sustainable rural housing by providing permanent dwellings and associated basic amenities to households below the poverty line, and to identify the problems being faced by the respondents as well as the officials involved in dealing with the scheme. A comparative analysis of housing quality and access to essential services between beneficiary and non-beneficiary households in the Jammu and Doda districts of the Union Territory of Jammu and Kashmir has also been carried out.

Empirical evidence is drawn from a structured primary survey encompassing 320 rural households, comprising 160 PMAY-G beneficiaries and 160 non-beneficiaries. After conducting the survey through personal interview method, the findings of the study are that even after six years of scheme implementation in the study area, approximately 65% of the rural households remain outside the program's coverage. Furthermore, a significant proportion of households continue to lack access to other civic amenities such as individual sanitation facilities, safe drinking water, and clean cooking fuel, thereby posing challenges to achieving inclusive and sustainable rural development.

Keywords: PMAY-G, Sustainable Development, Rural Housing, Basic Amenities, SDGs, Jammu and Kashmir, Policy Evaluation

Introduction

Besides food and clothing, housing is one of the most fundamental human needs. Adequate housing contributes not only to physical and mental well-being but also enables individuals to live with dignity, peace, and security. Article 25 of the Universal Declaration of Human Rights (1948) affirms that everyone has the right to a standard of living adequate for health and well-being, which includes access to housing, food, medical care, and necessary social services. Similarly, the 1966 International Covenant on Economic, Social and Cultural Rights recognizes adequate and affordable housing as an essential component of the right to an adequate standard of living.

In line with these global commitments, the United Nations Sustainable Development Goals (SDGs) further emphasize the centrality of housing and basic services. Target 11.1 of SDG 11 aims to ensure access to safe, affordable, and adequate housing for all by 2030, especially for the homeless population. SDG 6 complements this by calling for universal access to safe drinking water, sanitation, and hygiene, while also focusing on the sustainable management of water resources.

Despite these global efforts, rapid population growth has created significant pressure on housing systems, leading to widespread shortages of affordable and adequate dwellings. According to the United Nations, an estimated 1.6 billion people globally lack access to adequate housing (UN, 2024).

In response to these challenges, the Government of India has implemented a series of housing policies and programs since independence to address the needs of economically disadvantaged groups, particularly in rural areas. The first such initiative was the Integrated Subsidized Housing Scheme for Industrial Workers and Economically Weaker Sections launched in 1952. Several government schemes have been introduced and implemented from time to time to provide housing assistance to low income families.

A major milestone was the introduction of the Indira Awas Yojana (IAY) in 1985, which aimed to provide housing grants to marginalized groups such as Scheduled Castes, Scheduled Tribes, freed bonded laborers, disabled-headed households, and non-SC/ST families living below the poverty line. In 2016, the IAY was restructured and rebranded as the Pradhan Mantri Awas Yojana, with separate components for rural (Gramin) and urban areas.

The Pradhan Mantri Awas Yojana–Gramin (PMAY-G) sets out an ambitious target of constructing 2.95 crore pucca houses in rural India by 2022. Unlike its predecessor, PMAY-G adopts a more comprehensive approach by integrating essential amenities such as sanitation, electricity, and clean cooking fuel, with the overreaching objective of “Housing for All.” The present study seeks to evaluate the effectiveness of PMAY-G in fulfilling its core objective of providing adequate housing and basic amenities among beneficiary and non-beneficiary households in the Jammu and Doda districts of the Union Territory of Jammu and Kashmir, and the problems faced by the respondents as well as officials involved in dealing with the scheme.

The paper is structured into four sections. Section 1 is about introduction, Section 2 presents a review of the existing literature on the significance of adequate housing and prior assessments of government housing schemes in India. Section 3 outlines research gaps, main objectives and research methodology of the study. Section four includes results and discussions, problems and suggestions.

Section-2: Literature Review

Besides food and clothing, housing satisfies the basic need of human lives, Deshpande (1985). Shelter is one of the important necessities of human race, Rao (1985). A person's social, psychological as well as economic needs are satisfied by the house or shelter. The Seventh Five Year Plan (1985-1990) clearly states that housing ranks next to food and clothing importance for fulfilling the basic needs of the population, and for healthy and civilized existence of human being, a certain minimum standard of housing is essential. Munshi (2001) conducted his study on rural economy in one of the poorest districts of West Bengal by analyzing the socio-economic condition of rural households, the housing and sanitation environment of a rural economy in the study area, and highlighted that approximately 70 percent of the respondent households lived in houses which were not suitable enough for human habitation, with poor toilet and sanitation both at the village and household level. The study found that of total, only 6.54 percent of the respondent households had proper toilet facility. Though the village level self governments, such as local Panchayats participated actively in the bottom to top planning process in West Bengal, but they paid poor attention to the problems faced by the respondent families into the domain of their works.

Mohapatra (2012) in his study has talked about a basic need approach which includes six components at global level. The components are housing, sanitation, water supply, nutrition, health and basic education. By using all these components, one can measure the socio-economic exclusion as well as the extent of deprivation in the society. The author claims that of all these components, housing serves the most important basic need of mankind in terms of security, self esteem, social status, safety and self satisfaction. According

to the author, affordable and adequate housing not only supports quality of life, health and environment but also it is an important indicator of the prosperity and growth of an individual as well as of the nation. By creating avenues for dwelling based activities, housing sector has multiple effects on economic growth and employment to across different section of people.

Mukhopadhyay and Indira Rajaraman (2012) highlighted the importance of having a house in terms of economic benefit. The authors stated that housing is one of the common durable assets which people in rural India owned and it has more significance because transmission of cultural values can be done through homes to the society. Besides evolving as a prime component in providing shelter, housing aids local development by creating employment opportunities. A house to a poor man helps in providing him a self-identity in the society. Apart from this, it can influence the overall standard of living of the rural people.

Sarkar *et al.* (2016) in their article made a critical review of Government of India's schemes for affordable housing in India with special reference to Rajiv Awas Yojana and Housing for All by 2022. The authors analyzed the efficiencies of these policies in helping the sections of the population who were unable to avail housing from the formal market, both through direct support. The study found that most of the beneficiary families did not deserve to be included under these schemes. There were other families that needed to be benefitted initially under the scheme.

Section-3: Research Gap, Objectives and Methodology of the Study

The continuous pressure of rural poor in India has resulted into a very large demand for houses. The government of India since independence has come up with various policies and initiatives in order to provide houses to the poor houseless families residing in the rural and urban areas. Pradhan Mantri Awas Yojana (PMAY) is one of such initiatives which is a restructured form of Indira Awas Yojana. PMAY scheme is applicable for both rural and urban areas. The present study confines itself to only Pradhan Mantri Awas Yojana-Gramin (PMAY-G). In the review of literature, no study pertaining to PMAY-G in the study area was found. To bridge this gap, the present study examines the extent of household coverage under PMAY-G in the study area, and the problems being faced by the respondents as well as the officials involved in dealing with the scheme. The present study is an addition to the existing literature and will be helpful for the researchers and policy makers to examine how far this scheme has been effective in meeting its targets in the study area.

Methodology:

Sampling and Data Collection

The study is mainly based on the primary data collected through a personal interview method on a well-structured questionnaire of 320 sampled households (160 beneficiaries and 160 non-beneficiaries) from two districts, Jammu and Doda of J&K UT. Secondary data have been collected from the rural development departments of the concerned blocks, ward members and the sarpanches. The scheme is implemented in all the districts of the UT, but for the present study Jammu and Doda districts were selected randomly. From each district, two blocks were selected and from each block, 4 villages with highest number of households were selected. From district Jammu, selected blocks were Akhnoor and Khore. Sungal, Gandhrwan, Pingiari and Badgal Kalan were the villages selected from Akhnoor block, while the villages selected from Khore block were Pallanwala, Pargawal, Khore and Saher. From district Doda, the selected blocks were Assar and Bhagwah. Mundhar, Dhandal, Bijarni and Bhagwah were the selected villages from Bhagwah block of the district, while from Assar block, the selected villages were Bibrota, Chakka, Shamthi and Charrote. The data for population and total number of households were taken from District Census Handbooks of 2011 Census. From each village, a sample of 20 households, which included 10 beneficiaries and 10 non-beneficiaries, was selected. Beneficiary respondent households were those which had got their houses constructed under the scheme while the non-beneficiaries were those families which were poor and lacked access to adequate housing but they had not been covered under the scheme. The information regarding the beneficiary and non-beneficiary respondents was obtained from the head of the village i.e. either from the Sarpanch or a Ward Member. After the collection of the data, it has been tabulated and analysed using simple statistical tools to accomplish the objectives of the study.

Section-4: Results and Discussion**Table-1a: extent of households covered and uncovered in jammu and doda district under the pmay-g**

District Jammu											
Block	Village	Houses Constructed (Covered)					Shortage of Houses (Uncovered)				
		UR	SC	ST	Others	Total	UR	SC	ST	Others	Total
Khore	Khore	16 (19.27)	67 (80.73)	-	-	83	110 (79.72)	28 (20.28)	-	-	138
	Pallanwala	11 (22.91)	36 (75.00)	01 (2.09)	-	48	97 (71.09)	29 (22.65)	02 (1.56)	-	128
	Saher	10 (23.25)	33 (76.75)	-	-	43	32 (84.22)	6 (15.78)	-	-	38
	Pargawal	15 (19.24)	63 (80.76)	-	-	78	147 (75.00)	49 (25.00)	-	-	196
	Total	52 (20.63)	199 (78.97)	01 (0.4)	-	252 (100)	386 (77.2)	112 (22.4)	02 (0.4)	-	500 (100)
Akhnoor	Sungal	98 (31.41)	196 (62.82)	18 (5.77)	-	312	217 (59.29)	126 (34.42)	23 (6.28)	-	366
	Gandhrwan	22 (17.89)	90 (73.17)	11 (8.94)	-	123	150 (48.39)	119 (38.39)	41 (13.23)	-	310
	Pingiari	34 (21.38)	121 (76.10)	4 (2.51)	-	159	156 (51.32)	139 (45.72)	9 (2.96)	-	304
	Badgal Kalan	07 (20.00)	28 (80.00)	-	-	35	50 (62.5)	28 (35.00)	02 (2.5)	-	80
	Total	161 (25.60)	435 (69.16)	33 (5.25)	-	629 (100)	573 (54.06)	412 (38.87)	75 (7.08)	-	1060 (100)
Jammu Total		213 (24.17)	634 (71.96)	34 (3.86)	-	881 (100)	959 (61.47)	524 (33.59)	77 (4.94)	-	1560 (100)
District Doda											
Block	Village	Houses Constructed					Shortage of Houses				
		UR	SC	ST	Others	Total	UR	SC	ST	Others	Total
Bhagwah	Mundhar	270 (71.42)	107 (28.31)	01 (0.26)	-	378	204 (89.47)	23 (10.09)	01 (0.44)	-	228
	Bijarni	300 (75.56)	48 (12.09)	49 (12.34)	-	397	311 (83.38)	09 (2.41)	53 (14.21)	-	373
	Dhandal	177 (64.13)	35 (12.68)	64 (23.19)	-	276	369 (89.13)	8 (1.93)	37 (8.94)	-	414
	Bhagwah	167 (79.52)	28 (13.33)	15 (7.14)	-	210	318 (97.55)	04 (1.23)	04 (1.23)	-	326
	Total	914 (74.48)	218 (17.29)	129 (10.23)	-	1261 (100)	1202 (89.63)	44 (3.28)	95 (7.08)	-	1341 (100)
Assar	Chakka	153 (60.24)	78 (30.71)	23 (9.06)	-	254	230 (91.63)	17 (6.77)	04 (1.59)	-	251
	Bibrota	15 (22.39)	31 (46.27)	21 (31.34)	-	67	96 (84.96)	04 (3.54)	13 (11.50)	-	113
	Shamthi	53 (41.41)	71 (55.47)	04 (3.13)	-	128	90 (80.36)	18 (16.07)	04 (3.57)	-	112
	Charrota	11 (9.82)	69 (61.61)	32 (28.57)	-	112	107 (46.12)	15 (6.47)	110 (47.41)	-	232
	Total	232 (41.35)	249 (44.39)	80 (14.26)	-	561 (100)	523 (73.87)	54 (7.63)	131 (18.50)	-	708 (100)
Doda Total		1146 (62.90)	467 (25.63)	209 (11.47)	-	1822 (100)	1725 (84.18)	98 (4.78)	324 (15.81)	-	2049 (100)

Source: Field Survey-2023. Note: The figures in the parentheses represent the percentage of houses completed or not completed out of the total requirement of houses in each village.

The data in table-1a shows that in Jammu, a higher proportion of houses constructed for SC households, while the shortage of houses remains significant across all groups, with the highest shortages in Akhnoor block. In Khore block, highest number of houses (79%) was constructed for the SCs, while in Akhnoor block, again the highest number of beneficiaries under the scheme belonged to Scheduled Castes (69%). The shortage of houses remained significant in Saher, Pargawal and Pallanwala among UR households. In Doda, the majority of houses constructed are for UR household (63%), while SC and ST groups have relatively fewer houses built. Assar block of the district has more houses constructed for the Scheduled castes, the major target community as per the provisions of the scheme. The shortage of houses remains significant, especially among UR households, with notable gaps in villages like Dhandal and Chakka.

table-1b: comparative analysis of pmay-g coverage - district jammu vs. district doda

District Jammu (881)			District Doda (1822)		
Block	Houses Constructed	Shortage of Houses	Block	Houses Constructed	Shortage of Houses
Akhnoor	629	1060	Bhagwah	1261	1341
Khour	252	500	Assar	561	708
Total	881	1560	Total	1822	2049
Major beneficiary Group	SC (72%)	-	-	UR (63%)	-
Major Uncovered Group	-	UR (61%)	-	-	UR (84%)
ST Coverage	Low (4%)	-	-	Moderate (11%)	-

Source: Authors' analysis from table-1a.

The comparative analysis of PMAY-G coverage in Districts Jammu and Doda highlights key differences in implementation and beneficiary distribution. Jammu recorded the construction of 881 houses across Akhnoor (629) and Khour (252), against a shortage of 1,560 houses. Doda reported higher coverage, with 1,822 houses built in Bhagwah (1,261) and Assar (561), but also a greater shortage of 2,049 houses.

In Jammu, Scheduled Castes (SC) formed the major beneficiary group (72%), particularly due to their higher population in the district. However, the Unreserved (UR) group remained largely uncovered (61%), and ST coverage was only 4%. In Doda, the UR group dominated both the covered (63%) and uncovered (84%) segments, while STs had moderate representation 11%. In both the districts, ST population as proportion of total population is very less.

Overall, while Doda achieved greater housing coverage, both districts face considerable shortages and disparities in inclusion, especially among UR and ST populations. Population proportions in specific blocks significantly influenced the beneficiary distribution

table-2a: status of housing access among sampled households before and after pmay-g implementation in the selected districts

District Jammu					
Block	Village	No. of HH	Type of Housing (No. of HH)		
			Before	After	
			Kutcha	Semi-Pucca	Pucca
Khore	Khore	10	10 (100.00)	02 (20.00)	08 (80.00)
	Pallanwala	10	10 (100.00)	03 (30.00)	07 (70.00)
	Saher	10	10 (100.00)	02 (20.00)	08 (80.00)
	Pargawal	10	10 (100.00)	04 (40.00)	06 (60.00)
	Total	40	40 (100.00)	11 (27.5)	29 (72.5)
Akhnoor	Sungal	10	10 (100.00)	01 (80.00)	09 (90.00)
	Gandhrwan	10	10 (100.00)	04 (80.00)	06 (60.00)
	Pingiari	10	10 (100.00)	02 (20.00)	08 (80.00)
	Badgal Kalan	10	10 (100.00)	02 (20.00)	08 (80.00)
	Total	40	40 (100.00)	09 (22.5)	31 (77.5)
Jammu Total		80	80 (100.00)	20 (25.00)	60 (75.00)
District Doda					
Block	Village	No. of HH	Type of Housing (No. of HH)		
			Before	After	
			Kutcha	Semi-Pucca	Pucca
Bhagwah	Mundhar	10	10 (100.00)	02 (20.00)	08 (80.00)
	Bijarni	10	10 (100.00)	03 (30.00)	07 (70.00)
	Dhandal	10	10 (100.00)	03 (30.00)	07 (70.00)
	Bhagwah	10	10 (100.00)	04 (40.00)	06 (60.00)
	Total	40	40 (100.00)	12 (30.00)	28 (70.00)
Assar	Chakka	10	10 (100.00)	02 (20.00)	08 (80.00)
	Bibrota	10	10 (100.00)	03 (30.00)	07 (70.00)
	Shamthi	10	10 (100.00)	03 (30.00)	07 (70.00)
	Charrota	10	10 (100.00)	03 (30.00)	07 (70.00)
	Total	40	40 (100.00)	11 (27.5)	29 (72.5)
Doda Total		80	80 (100.00)	23 (28.75)	57 (71.25)

Source: Field Survey-2023, HH: Household. Note: The figures in the parentheses represent the percentage calculated out of the total sample taken from each village.

The table-2a compares the type of housing (Pucca, Semi-Pucca, and Kutcha) before and after the scheme for 160 beneficiary households in Jammu and Doda. In district Jammu, before the scheme, all households lived in Kutcha houses. After implementation, 75% transitioned to Pucca houses, while the remaining 25% shifted to Semi-Pucca houses, eliminating Kutcha housing entirely. In district Doda, before the implementation of the scheme, all households lived in Kutcha houses. After the scheme, 71.25% transitioned to Pucca houses, while 28.75% moved to Semi-Pucca houses, completely eliminating Kutcha housing. This finding has been supported by Mukhopadhyay and Rajaraman in their research study conducted in 2012 where the authors have concluded that rural housing schemes have been beneficial in accomplishing the task of providing adequate housing to the poor people. This indicates a significant improvement in housing quality due to the scheme.

table-2b: comparative analysis of housing transition of sampled pmay-g beneficiary respondents – district jammu vs. district doda

District Jammu				District Doda			
Block	HH in Kutcha Houses (Before)	HH in Pucca Houses (After)	HH in Semi-Pucca Houses (After)	Block	HH in Kutcha Houses (Before)	HH in Pucca Houses (After)	HH in Semi-Pucca Houses (After)
Akhnoor	40 (100.0)	31 (77.5)	09 (22.5)	Bhagwah	40 (100.0)	28 (70.0)	12 (30.0)
Khaur	40 (100.0)	29 (72.5)	11 (27.5)	Assar	40 (100.0)	29 (72.5)	11 (27.5)
Total	80 (100.0)	60 (75.0)	20 (25.0)	Total	80 (100.0)	57 (71.25)	23 (28.75)

Source: Authors' analysis from table-2a. Note: The figures in the parentheses represent the percentage calculated out of the total sample taken from each block.

The comparative analysis as given in Table-2b highlights the effectiveness of PMAY-G in improving rural housing across both Jammu and Doda districts. Among the 80 sampled households from each district who initially lived in kutcha houses, 60 in Jammu and 57 in Doda successfully transitioned to pucca houses, reflecting the policy's core objective of providing durable housing for the rural poor. Additionally, 20 households in Jammu and 23 in Doda moved to semi-pucca structures, indicating partial but notable improvements in housing quality. This was due to the locational disadvantage which district Doda had in comparison to Jammu. All the selected villages of District Jammu were having an easy and shorter access to the construction material which led to smaller transportation cost leading to construction of better housing facilities under the scheme.

The data show PMAY-G's positive impact, particularly in facilitating the transition from kutcha to more permanent housing. While Jammu performed slightly better in achieving full pucca house transitions, Doda also demonstrated substantial gains, indicating the scheme's broad effectiveness in addressing rural housing needs. It can be concluded from the data that the government through its PMAY-G scheme is determined to achieving the United Nations Sustainable Development Goals (SDGs), particularly Goal 11, which seeks to make cities and human settlements inclusive, safe, resilient, and sustainable, access to secure, affordable, and quality housing is paramount. These findings coincide with the study conducted by Mohapatra (2012) in which the author has talked about a basic need approach which includes six components at global level. The components are housing, sanitation, water supply, nutrition, health and basic education. By using all these components, one can measure the socio-economic exclusion as well as the extent of deprivation in the society.

table-3a: access to other civic amenities before and after pmay-g implementation among sampled beneficiary households

District Jammu										
Block	Village	No. of HH	Type of Housing (No. of Household)							
			Separate Toilet Facility		LPG Cylinder		Clean Drinking Water		Electricity Connection	
			Before	After	Before	After	Before	After	Before	After
Khore	Khore	10	02 (20.0)	07 (70.0)	10 (100.0)	10 (100.0)	06 (60.0)	10 (100.0)	10 (100.0)	10 (100.0)
	Pallanwala	10	01 (10.0)	03 (30.0)	10 (100.0)	10 (100.0)	03 (30.0)	07 (70.0)	10 (100.0)	10 (100.0)
	Saher	10	04 (40.0)	07 (70.0)	10 (100.0)	10 (100.0)	04 (40.0)	09 (90.0)	10 (100.0)	10 (100.0)
	Pargawal	10	01 (10.0)	03 (30.0)	10 (100.0)	10 (100.0)	05 (50.0)	06 (60.0)	09 (90.0)	10 (100.0)
	Total	40	08 (20.00)	20 (50.00)	40 (100.00)	40 (100.0)	18 (45.0)	32 (80.0)	39 (97.5)	40 (100.0)
Akhnoor	Sungal	10	05 (50.0)	08 (80.0)	08 (80.0)	08 (80.0)	06 (60.0)	08 (80.0)	09 (90.0)	10 (100.0)
	Gandhrwan	10	03 (30.0)	08 (80.0)	09 (90.0)	09 (90.0)	06 (60.0)	09 (90.0)	08 (80.0)	09 (90.0)
	Pingiari	10	02 (20.0)	08 (80.0)	07 (70.0)	07 (70.0)	07 (70.0)	09 (90.0)	10 (100.0)	10 (100.0)
	Badgal Kalan	10	05 (50.0)	08 (80.0)	09 (90.0)	09 (80.0)	07 (70.0)	09 (90.0)	09 (90.0)	10 (100.0)

	Total	40	15 (37.5)	32 (80.0)	33 (82.5)	33 (82.5)	26 (65.0)	35 (87.5)	36 (90.0)	39 (97.5)
Jammu Total		80	23 (28.75)	52 (65.0)	73 (91.25)	73 (91.25)	44 (55.00)	67 (83.75)	75 (93.75)	79 (98.75)
District Doda										
Block	Village	No. of HH	Type of Housing (No. of Household)							
			Separate Toilet Facility		LPG Cylinder		Clean Drinking Water		Electricity Connection	
			Before	After	Before	After	Before	After	Before	After
Bhagwah	Mundhar	10	05 (50.0)	08 (80.0)	09 (90.0)	10 (100.0)	08 (80.0)	09 (90.0)	09 (90.0)	09 (90.0)
	Bijarni	10	05 (50.0)	08 (80.0)	08 (80.0)	10 (100.0)	06 (60.0)	08 (80.0)	10 (100.0)	10 (100.0)
	Dhandal	10	06 (60.0)	08 (80.0)	07 (70.0)	09 (90.0)	08 (80.0)	09 (90.0)	10 (100.0)	10 (100.0)
	Bhagwah	10	05 (50.0)	07 (70.0)	08 (80.0)	09 (90.0)	05 (50.0)	09 (90.0)	10 (100.0)	10 (100.0)
	Total	40	21 (52.5)	31 (77.5)	32 (80.0)	38 (95.0)	27 (67.5)	35 (87.5)	39 (97.5)	39 (97.5)
Assar	Chakka	10	06 (60.0)	07 (70.0)	08 (80.0)	09 (90.0)	06 (60.0)	07 (70.0)	10 (100.0)	10 (100.0)
	Bibrota	10	05 (50.0)	06 (60.0)	08 (80.0)	08 (80.0)	08 (80.0)	08 (80.0)	10 (100.0)	10 (100.0)
	Shamthi	10	06 (60.0)	09 (90.0)	08 (80.0)	08 (80.0)	07 (70.0)	08 (80.0)	10 (100.0)	10 (100.0)
	Charrota	10	05 (50.0)	08 (80.0)	07 (70.0)	08 (80.0)	08 (80.0)	08 (80.0)	10 (100.0)	10 (100.0)
	Total		22 (55.0)	30 (75.0)	31 (77.5)	32 (80.0)	29 (72.5)	31 (77.5)	40 (100.0)	40 (100.0)
Doda Total		80	43 (53.75)	61 (76.25)	63 (78.75)	71 (88.75)	56 (70.00)	66 (82.5)	79 (98.75)	79 (98.75)

Source: Field Survey-2023, HH: Household. Note: The figures in the parentheses represent the percentage calculated out of the total sample taken from each village

The tables-3a highlights improvements in access to basic facilities among beneficiary households in the districts under the study. In Jammu, significant progress is observed in access to separate toilets (28.75% to 65%), clean drinking water (55% to 83.75%), and electricity connections (93.75% to 98.75%). While approximately 91% households in the district already had LPG access, other facilities, particularly toilets and clean drinking water, saw notable improvements, indicating the scheme's positive impact on overall living conditions. Also, notable progress is seen in Doda in separate toilet facilities (53.75% to 76.25%), LPG cylinder usage (78.75% to 88.75%), clean drinking water access (70% to 82.5%), and electricity connections (98.75% maintained). While electricity coverage was already high, the most significant improvements are in sanitation and water access, indicating enhanced living conditions due to the scheme.

table-3b: comparative analysis of having an access to other civic amenities among sampled beneficiary households before and after pmay-g implementation- district jammu vs. district doda

Basic Facility	District Jammu				District Doda			
	Block Akhnoor		Block Khour		Block Bhagwah		Block Assar	
	Before	After	Before	After	Before	After	Before	After
Separate Toilet Facility	15 (37.5)	32 (80.0)	08 (20.0)	20 (50.0)	21 (52.5)	31 (77.5)	22 (55.0)	30 (75.0)
LPG Cylinder	33 (82.5)	33 (82.5)	40 (100.0)	40 (100.0)	32 (80.0)	38 (95.0)	31 (77.5)	32 (80.0)
Clean Drinking Water	26 (65.0)	35 (87.5)	18 (45.0)	32 (80.0)	27 (67.5)	35 (87.5)	29 (72.5)	31 (77.5)
Electricity Connection	36 (90.0)	39 (97.5)	39 (97.5)	40 (100.0)	39 (97.5)	39 (97.5)	40 (100.0)	40 (100.0)

Source: Authors' analysis from table-3a. Note: The figures in the parentheses represent the percentage calculated out of the total sample taken from each village.

Table-3b presents a comparative analysis of access to civic amenities before and after the implementation of PMAY-G across sampled households in District Jammu and District Doda, reflecting the scheme's role in advancing Sustainable Development Goal (SDG) 6, "Clean Water and Sanitation" and SDG 7, "Affordable and Clean Energy." In both districts, there is a significant improvement in access to separate toilet facilities, rising from 37.5% to 80.0% in Akhnoor and from 20.0% to 50.0% in Khour (Jammu), and from 52.5% to 77.5% in Bhagwah and from 55.0% to 75.0% in Assar (Doda), directly contributing to SDG 6. Access to clean drinking water also showed marked improvement: from 65.0% to 87.5% in Akhnoor, 45.0% to 80.0% in Khour, 67.5% to 87.5% in Bhagwah, and 72.5% to 77.5% in Assar. Under SDG 7, the scheme is indirectly facilitating access to clean energy as evidenced by a rise in LPG usage in Bhagwah (80.0% to 95.0%) and a slight increase in Assar (77.5% to 80.0%), while maintaining full or near-full coverage in Khour and Akhnoor. Electricity connections were already high and reached 100% in most blocks post-implementation. Overall, PMAY-G not only ensures dignified housing but also catalyzes progress toward key SDGs by enhancing access to sanitation, clean water, and energy in rural areas.

table-4a: access to civic amenities among sampled non-beneficiary households in the study area

District Jammu								
Block	Village	No. of HH	Type of Housing (No of HH)		Separate Toilet Facility	LPG Cylinder	Clean Drinking water	Electricity Connection
			Semi-Pucca	Kutcha				
Khore	Khore	10	-	10 (100.00)	05 (50.00)	10 (100.00)	07 (70.00)	08 (80.00)
	Pallanwala	10	-	10 (100.00)	01 (10.00)	05 (50.00)	07 (70.00)	09 (90.00)
	Saher	10	-	10 (100.00)	02 (20.00)	06 (60.00)	06 (60.00)	10 (100.00)
	Pargawal	10	-	10 (100.00)	01 (10.00)	04 (40.00)	03 (30.00)	07 (70.00)
	Total	40	-	40 (100.0)	09 (22.5)	25 (62.5)	23 (57.5)	34 (85.0)
Akhnoor	Sungal	10	-	10 (100.00)	04 (40.00)	05 (50.00)	08 (80.00)	10 (100.00)
	Gandhrwan	10	-	10 (100.00)	06 (60.00)	05 (50.00)	08 (80.00)	10 (100.00)
	Pingiari	10	-	10 (100.00)	05 (50.00)	06 (60.00)	07 (70.00)	09 (90.00)
	Badgal Kalan	10	-	10 (100.00)	05 (50.00)	08 (80.00)	08 (80.00)	10 (100.00)
	Total		-	40 (100.0)	20 (50.0)	24 (60.0)	31 (77.5)	39 (97.5)
Jammu Total		80	-	80 (100.00)	29 (36.25)	49 (61.25)	54 (67.5)	73 (91.25)
District Doda								
Block	Village	No. of HH	Type of Housing (No of HH)		Separate Toilet Facility	LPG Cylinder	Clean Drinking water	Electricity Connection
			Semi-Pucca	Kutcha				
Bhagwah	Mundhar	10	01 (10.00)	09 (90.00)	07 (70.00)	08 (80.00)	09 (90.00)	09 (90.00)
	Bijarni	10		10 (100.00)	06 (60.00)	09 (90.00)	09 (90.00)	10 (100.00)
	Dhandal	10	02 (20.00)	08 (80.00)	06 (60.00)	10 (100.00)	08 (80.00)	10 (100.00)
	Bhagwah	10	-	10 (100.00)	08 (80.00)	10 (100.00)	09 (90.00)	10 (100.00)
	Total	40	03 (7.5)	37 (92.5)	27 (67.5)	37 (92.5)	35 (87.5)	39 (97.5)
Assar	Chakka	10	01 (10.00)	09 (90.00)	06 (60.00)	09 (90.00)	09 (90.00)	10 (100.00)
	Bibrota	10	01 (10.00)	09 (90.00)	06 (60.00)	09 (90.00)	08 (80.00)	09 (90.00)
	Shamthi	10		10 (100.00)	05 (50.00)	08 (80.00)	08 (80.00)	10 (100.00)
	Charrota	10		10 (100.00)	04 (40.00)	07 (70.00)	08 (80.00)	09 (90.00)

	Total	40	02 (5.0)	38 (95.0)	21 (52.5)	33 (82.5)	33 (82.5)	38 (95.0)
Doda Total		80	05 (6.25)	75 (93.75)	48 (60.00)	70 (87.5)	68 (85.00)	77 (96.25)

Source: Field Survey-2023. HH: Household. Note: The figures in the parentheses represent the percentage calculated out of the total sample taken from each village.

The table-4a shows that in Jammu, all 80 sampled non-beneficiary households (100%) still reside in kutcha houses. Access to separate toilet facilities (36.25%) and LPG cylinders (61.25%) remains lower than that of beneficiaries. However, clean drinking water (67.5%) and electricity connections (91.25%) are relatively high but still lag behind beneficiary households. Similarly in Doda, the data reveal that 93.75% of non-beneficiary households in the district still live in kutcha houses, with only a small proportion of the sampled households residing in semi-pucca housing. While access to electricity (96.25%) and LPG (87.5%) is relatively high, facilities like separate toilets (60%) and clean drinking water (85%) remain a concern (Munshi, 2001). Compared to beneficiaries, non-beneficiaries continue to face significant housing deprivation and moderate gaps in basic amenities, highlighting the importance of PMAY-G in improving living conditions.

table-4b: comparative analysis of having an access to civic amenities among sampled non-beneficiary households-jammu vs. doda

Basic Facility	District Jammu		District Doda	
	Block Akhnoor (No of HH: 40)	Block Khour (No of HH: 40)	Block Bhagwah (No of HH: 40)	Block Assar (No of HH: 40)
Semi-Pucca Houses	-	-	03 (7.5)	02 (5.0)
Kutcha Houses	40 (100.0)	40 (100.0)	37 (92.5)	38 (95.0)
Separate Toilet Facility	09 (22.5)	20 (50.0)	27 (67.5)	21 (52.5)
LPG Cylinder	25 (62.5)	24 (60.0)	37 (92.5)	33 (82.5)
Clean Drinking Water	23 (57.5)	31 (77.5)	35 (87.5)	33 (82.5)
Electricity Connection	34 (85.0)	39 (97.5)	39 (97.5)	38 (95.0)

Source: Authors' analysis from table-4a. Note: The figures in the parentheses represent the percentage calculated out of the total sample taken from each village.

Table-4b presents a comparative analysis of access to civic amenities among non-beneficiary households in four blocks, Akhnoor and Khour in District Jammu, and Bhagwah and Assar in District Doda, with 40 households surveyed per block. The data show a clear picture of inter-district disparity in basic rural infrastructure, revealing a pressing need for targeted policy intervention in line with the Sustainable Development Goals (SDGs), especially those related to clean water and sanitation (SDG 6), affordable and clean energy (SDG 7), and sustainable communities (SDG 11).

Housing conditions remain inadequate, especially in Jammu, where all non-beneficiary households still live in kutcha houses, whereas Doda shows a marginally better situation, with 7.5% in Bhagwah and 5% in Assar living in semi-pucca houses. Sanitation access is alarmingly low in Akhnoor (22.5%), though somewhat better in Khour (50%). In contrast, Bhagwah (67.5%) and Assar (52.5%) perform notably better. Similarly, access to LPG cylinders, an indicator of clean energy use, is significantly higher in Doda blocks (over 80%) compared to Jammu blocks (around 60%).

The disparity continues in access to clean drinking water, where Doda again shows higher coverage (87.5% in Bhagwah, 82.5% in Assar) than Jammu (57.5% in Akhnoor and 77.5% in Khour). Electricity access is relatively uniform and high across both districts, though still slightly lagging in Akhnoor at 85%.

Insufficient funds sanctioned under the scheme, lesser knowledge about the provisions of the scheme, lack of land title and ownership among the eligible non-beneficiary families, biasedness in the selection of the families and corruption were some of the reasons why the deserving families were deprived of adequate housing and better civic amenities in the selected districts. These findings have also been found by Sarkar *et al.* (2016) in their study on critical review of Government of India's schemes for affordable housing in India with special reference to Rajiv Awas Yojana and Housing for All by 2022. The authors concluded in their study that most of the beneficiary families did not deserve to be included under these schemes. There were other families that needed to be benefitted initially under the scheme.

These findings underscore a critical need for inclusive rural development policies that bridge regional disparities and extend benefits to non-beneficiary households, ensuring "no one is left behind", a core principle of the 2030 Agenda for Sustainable Development. While schemes like PMAY-G have positively impacted beneficiaries, the non-beneficiary segment remains underserved, demanding urgent attention in future housing, sanitation, and utility schemes to uphold the SDGs' vision of universal access to basic services and dignified living conditions.

Application of the Garret's Ranking Technique for ranking Problems being faced by the Respondents in the Study Area.

An attempt has been made to recognize the problems faced by the respondents that include beneficiaries of PMAY-G, eligible non-beneficiaries, and officials involved in the implementation of the scheme in the study area. The problems were identified from the respondents and then ranked by making use of Garrett's Ranking Technique. In the present study, it has been used to find the most significant problems faced by the respondent households and officials, leading to the poor implementation of scheme in the study area. Founded on the Garret's Ranking technique, the study had the respondents rank different problems and outcome based on their impact thereby converting into score value and rank with the help of the following formula:

Percent position = $100 (R_{ij} - 0.5) / N_j$ Where, R_{ij} = Rank given for the i^{th} variable by j^{th} respondent, N_j = Number of variable ranked by j^{th} respondent.

Since the nature of the factors differs among the beneficiary and non-beneficiary respondents, Garrett's rankings have been calculated separately for these two groups. Also the problems identified were almost similar in terms of prevalence and frequency. Therefore, a combined Garret ranking was calculated for the two districts under study.

table-5a: calculation of garret value and ranking (beneficiary respondents) for the two districts combined under the study

Problems faced by the beneficiary households	Ranks given by the respondents are converted into Garret Value										
	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	Total	Average	Rank
Insufficient/Inadequate Funds	10000	2415	-	-	-	-	-	-	12415	77.59	1
Delay in the disbursement of the Installments	800	5865	3900	-	-	-	-	-	10565	66.03	2
Corruption and Middlemen Involvement	560	1035	3300	1325	1034	720	224	220	8418	52.61	3
Lesser knowledge of the Provisions of the Scheme	160	345	120	954	1974	-	2720	120	6393	39.96	7
More reliability on the locally produced Construction Material	320	552	1440	2332	423	440	128	1120	6755	42.22	6
Inadequate Access to Basic Infrastructure	320	138	180	901	987	1000	448	1488	5462	34.14	8
Limited Customization and Design Flexibility	480	345	420	1696	1739	1920	640	100	7340	45.87	4
Inadequate Monitoring and Evaluation	160	345	240	1272	1363	2320	960	160	6820	42.63	5

table-5b: calculation of garret value and ranking (non-beneficiary respondents) for the two districts combined under the study

Problems faced by the Non-Beneficiary	Ranks given by the respondents are converted into Garret Value								
	1 st	2 nd	3 rd	4 th	5 th	6 th	Total	Average	Rank
Biasedness in the Selection of the Households under the Scheme	3696	2016	1350	782	1073	207	9124	57.03	2
Lesser knowledge of the Provisions of the Scheme	1694	3654	1998	1058	555	115	9074	56.71	3
Insufficient/Inadequate Funds	5621	3087	2052	-	-	-	10760	67.25	1
Lack of Land Title and Ownership Issues	616	126	324	3404	1517	667	6654	41.59	4
Limited Customization and Design Flexibility	154	-	2322	368	1517	1518	5879	36.74	6
No Revision of the Ration Cards since 2011	539	1197	594	1748	1258	1173	6509	40.68	5

Source: Author's Compilation from the data collected through a questionnaire in 2023

In the table-5a, the Garret Ranking Analysis identifies insufficient funds and delayed disbursements as the biggest challenges for PMAY-G beneficiaries, followed by corruption, limited design flexibility, and inadequate monitoring. Lack of awareness and poor infrastructure further hinder program effectiveness. To improve outcomes, funding should be increased, disbursements streamlined, corruption curbed, and monitoring strengthened. Awareness campaigns and customizable housing models can enhance impact, ensuring better infrastructure, sustainability, and socio-economic upliftment in rural India.

The analysis of non-beneficiary respondents in table-5b highlights key challenges in accessing PMAY-G benefits. The most critical issue, ranked highest, is Insufficient/Inadequate Funds (67.25), indicating financial constraints preventing the respondents from taking benefits from the scheme. Biasedness in the Selection of Households (57.03) and Lesser Knowledge of Scheme Provisions (56.71) follow, suggesting gaps in awareness and possible exclusions in beneficiary selection. Lack of Land Title and Ownership Issues (41.59) also emerges as a major barrier, limiting eligibility. Challenges related to No Revision of Ration Cards since 2011 (40.68) and Limited Customization and Design Flexibility (36.74) further indicate systemic constraints. On asking the officials about the non inclusion of the deserving non-beneficiary respondents under the scheme, it was found that there was no revision of ration cards since 2011 and also the respondents didn't have ownership of land which made it difficult to undertake geo-tagging of the proposed land for constructing the houses. Addressing these concerns requires enhanced transparency in selection,

awareness campaigns, financial support, ownership of land, and policy revisions to improve accessibility for non-beneficiaries.

Conclusion and Policy Implications

The analysis clearly demonstrates the transformative impact of PMAY-G on beneficiary households, particularly in housing conditions and access to basic amenities. Beneficiary households have witnessed a complete shift from kutcha to pucca housing, while non-beneficiaries predominantly continue to reside in kutcha or semi-pucca structures. Additionally, access to separate toilets, LPG, clean drinking water, and electricity has significantly improved for beneficiaries, whereas non-beneficiaries still face gaps in these essential services. The scheme significantly improved sanitation, cooking fuel, drinking water, and electricity access, though there are some regional disparities. These regional disparities are attributed mainly to the requirement of housing and other civic amenities in the two districts, the proportion of the deserving households in the selected villages, and the locational disadvantage between the two districts. The cost of buying and transporting construction material was lesser in Jammu as compared to Doda. Doda is a hilly district and most of the construction material was supplied from Jammu and then it was transported to the rural areas which increased the cost of constructing the houses.

To ensure inclusive development, future policy interventions should focus on expanding coverage to remaining eligible households, strengthening monitoring mechanisms for better implementation, and integrating other welfare schemes (sanitation, water supply, and electrification), to create a comprehensive rural development framework for achieving SDGs. Special attention should be given to vulnerable groups to bridge the existing disparities in housing and basic amenities. The government must enhance financial support and ensure that there is timely disbursement of installments. Increasing fund allocations and ensuring the timely release of installments can accelerate house construction and reduce financial distress among beneficiaries. Addressing corruption and middlemen involvement through digital payment systems and third-party audits can improve the efficiency of the scheme. Revisiting selection criteria, revising outdated ration card databases, and resolving land title issues can ensure the inclusion of deserving households currently left out. Large-scale awareness drives and community engagement programs can bridge knowledge gaps, enabling more eligible households to apply. Providing design flexibility and improving access to essential services like drinking water and sanitation can further enhance housing quality and the attainment of SDG-11, which seeks to make cities and human settlements inclusive, safe, resilient, and sustainable, access to secure, affordable, and quality housing is paramount.

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