Senhri Journal of Multidisciplinary Studies
A Journal of Pachhunga University College
(A Peer Reviewed Journal)
https://senhrijournal.ac.in
10.36110/sjms.2020.05.01.003

2456-3757 (P)
2582-6840 (e)
Vol. 05, No. 01
Jan.-June, 2020

ACCESS TO HOUSING AND WATER IN RURAL AREA: A STUDY AT PUKPUI COMMUNITY, LUNGLEI, MIZORAM

RTC. Lalremruata* & S. Lalsangluri
Department of Social Work, Higher and Technical Institute, Mizoram, India
* rtcrema6@gmail.com
RTC. Lalremruata: https://orcid.org/0000-0002-0218-7505

ABSTRACT

Housing and water are the basic requirements to sustain rural development. The issues in regards to rural housing and water remain, despite the implementation of various schemes addressing these issues. The access to, as well as quality and adequacy of housing and water, are the main focus of this paper. The household economy plays a significant role in the improvement of housing conditions in the rural area. The availability of drinking water to all households do not reflect the scarcity of water being a serious issue, especially during the dry season. The practice of conscious use of water still needs to be emphasized.

Keywords: *Housing, Water, Rural, Access, Quality, Adequacy.*

Introduction

Rural development has been the priority for sustainable development in India due to a large portion of the population residing in rural areas. The rural population of India is 833 million constituting 68.84 percent of the total population (Census of India, 2011). The rural population comprised of 47.89 percent in Mizoram (Census of India, 2011). Rural development is greatly marked by the housing condition and availability of drinking water as they serve as basic amenities for the livelihood as well as the living standard of rural people. These two aspects are often overlooked despite the significant numbers of government schemes to improve in these areas.

The concept of housing has been explained differently by researchers. It was defined as a commodity (Smith, 1776), physical assets (Ricardo, 1817), an asset which is fixed despite ownership (Jevons, 1871), and a building with settlement (Henilane, 2016). To suit the research problem, a general definition of housing is offered as a building used for settlement where the condition is greatly determined by

physical assets available regardless of ownership.

Tedros Adhanom Ghebreyesus (2018) stated that the key pathway to provide healthy housing conditions and improving the health and well-being of all people is raising the housing standard. However, In India, the problem is still increasing with the estimated shortage of around 18 million houses, with 99% of the people from the economically weaker section in the society (Gopalan & Venkataraman, 2015). Furthermore, 10 million houses are reported as 'Dilapidated' (Census of India, 2001). As a result, the quality and quantity of housing remain a big concern.

Water is regarded as a global commodity with various usages (Wang et al., 2011). The process of evaporation from the ocean which resulted in rainfall put up with the supply of water. According to Kurunthachalam (2013), India is the fastest developing country with the largest rural shrinking water supply program. The usage and consumption of polluted water are the major factors of health-related problems. Kumar and Ballabh (2000) stated that the scarcity of water will be a product of continuous depletion and pollution of both the surface water and the groundwater resulting in conflict. Lalmalsawmzauva (2016) stated that there exists a great disparity in water supply between urban and rural as well as among rural communities in Mizoram.

The literature reviewed indicated that access to the quality as well as the adequacy of housing and water in rural areas especially within Mizoram is scarce.

Statement of the Problem

Housing and water are the basic requirements for the effective functioning of individuals and households. Rural housing and water condition have been overlooked despite being an important indicator as well as the foundation of development. The pattern and condition of housing as well as the quality and adequacy of water in rural areas are important areas that lack systematic investigation. The scarcity of data on these areas gives rise to the importance of the extensive study to reveal the rural housing and water condition in Mizoram. Thus, an assessment is made on the access to housing and water as well as the quality and adequacy of housing and water.

Methodology

The study employs a descriptive research design. Primary data was collected using a quantitative method where a semi-structured interview schedule was administered through a survey. Pukpui village was selected due to its proximity to Lunglei town in terms of geographical location and the type of community being a rural community. Disproportionate stratified random sampling was used with the sample size of 60 taking household as a unit. The four Young Mizo Association (YMA) sections are the selected physical strata with a geographical boundary separating each section within the community. The strata are further divided into the poor and non-poor category. Twenty samples from each YMA

section among four YMA sections were selected in which the poor and the non-poor households constitute the same number. The quantitative data are processed and analyzed using Ms. Excel and SPSS, which is presented in the form of frequency, averages, percentage, and Pearson Correlation Coefficient.

Field Settings

Pukpui community is a rural community located on the Northern side of Lunglei town with a longitude of 92.67765 and a latitude of 23.75925. Pukpui was established in 1973 and it was known for its richness in forest trees and medicinal herbs. Majority of the BPL family are concentrated in the southern side of the village and most of the people earn their living from agriculture and mainly sells their products in the nearby village or to the town. The total number of households is 448 in which the total population is 2200 and the majority of the family belongs to a nuclear family.

Result and Discussion

Socio-Demographic Characteristics of the respondents

The demographic characteristics of the respondents were divided into various sections such as Age, Denomination, family type, family size, and family form. The mean age of the respondents is 47. All the respondents are Christian and in regards to denomination a little more than half of the respondents (56.67%) belong to Baptist Church of Mizoram, and 10 (33.33%) of the respondents belong to United Pentecostal Church. Besides this, 2(6.67%) of the respondents belongs to Seventh Day Adventist and 1(3.33%) of the respondent belongs to Presbyterian Church of India. Among the respondents, 83.33% belong to the nuclear family, and 16.66%s are from the Joint family. In terms of Family size, 6.67% constitute a single member, 13.33% are family comprising of 3 members, 33.33% belong to a family comprising of 4-5 members and 14(46.67%) belong to the family having more than 6 members. The majority of the respondents (80%) belong to Stable family 20% are from Dysfunctional family (**Table 1**).

Table 1: Socio - Demographic Characteristics of respondents

SI. No.	Particulars	n=60
I	**Mean age**	47
II	**Denomination**	
	BCM	34 (56.67)
	PCI	2 (3.33)
	UPC	20 (33.33)
	Seventh Day Adventist	4 (6.67)
III	**Family type**	
	Nuclear	56 (93.33)
	Joint	4 (6.67)
IV	**Family Size**	
	1 member	4 (6.67)
	2-3 members	8 (13.33)
	4-5 members	20 (33.33)
	6 members and above	28 (46.67)
V	**Family form**	
	Stable	48 (80)
	Dysfunctional	12 (20)

Source: Computed

Figures in parentheses represent percentage

The economic status of the household

The economic status of the respondents is divided into five sections mainly, the Occupation of the family, Socio-economic status, and savings.

The distribution of Primary occupation of the family is Government service (30%), Farmer (26.67%), Driver (16.67%), Petty Trade (3.33%), Daily Wage Laborer (6.67%), Pensioner (13.33%), Livestock rearing (10.00%), and Business (16.67%). More than half of the respondents (60%) have a secondary source of income. The socio-economic status of the respondents indicates that both BPL and APL Family constitute 50%. The Mode of saving highlighted that 90% of the respondents maintain a bank account for saving (**Table 2**).

Table 2: Economic status of the households

SI. No.	Particulars	n=60
I	**Occupation**	
	Government service/pension	18 (30)
	Agriculture	16 (26.67)
	Driver	4 (6.67)
	Petty trade	2 (3.33)
	Daily wage labor	4 (6.67)
	Pensioner	8 (13.33)
	Livestock rearing	6 (10)
	Business	2 (3.33)
II	**Secondary Occupation**	
	Yes	36 (60)
	No	24 (40)
III	**Any Saving**	
	Yes	60
IV	**Mode of saving**	
	Bank	54 (90)
	Personal	6 (10)
VI	**Socio economic status**	
	APL	30 (50)
	BPL	30 (50)

Source: Computed

Figures in parentheses represent percentage

Household Income and Expenditure

The mean income (per year) differs among the family earning their income through agriculture (Rs. 49533), Livestock rearing (Rs. 71000), Government servant/ pensioner (Rs. 8333), Daily wage labor (Rs. 9266), and Business/Petty trade (Rs. 60150).

The mean expenditure of the family on medical expenses sums up to Rs.25000. Educational expense in a month on average sum up to Rs. 3540/- per month mainly for fees. The expenditure on electricity is Rs. 5100/- per year and the mean sum spent on water connection is Rs. 2846 annually (**Table 3**).

Table 3: Household income and expenditure (Mean)

SI. No.	n=60	
I	**Income**	
	Agriculture	49533
	Livestock rearing	71000
	Government service/pension	8333
	Daily wage labor	9266
	Business/petty trade	60150
II	**Expenditure**	
	Medical expenses	25000
	School-fees	3540
	Electric bill	5100
	Water bill	2868

Source: Computed

Household assets

Household's assets are divided into land, livestock, House/building, Television, Cellphone, Refrigerator, Washing Machine, Computer/Laptop, Inverter, four-wheelers, two-wheelers.

A little more than half (53.3%) of the households own land other than their settlement mainly used for agricultural purposes, and 46.7% of families do not have land other than their land of settlement. Livestock rearing is practiced among 26.7%. Only 6.7% own another house/building to rent. The majority of the respondents owned Television (86.7%) and Mobile phone (93.3%) while only one-third of the households owned computers/laptops (33.3%). The majority-owned Refrigerator (83.3%) and Washing machine (76.7%) and one-third of the population (33.3%) owned inverter. Ownership of vehicles indicated that 26.7% owned four-wheelers and 56.7% owned two-wheelers (**Table 4**).

Table 4: Household assets

Sl. No.	Particulars	n=60	
		No	Yes
1	Land	28 (46.7)	32 (53.3)
2	Livestock	44 (73.3)	16 (26.7)
3	House/Building	56 (93.3)	4 (6.7)
4	Television	8 (13.3)	52 (86.7)
5	Cellphone	4 (6.7)	56 (93.3)
6	Refrigerator	10 (16.7)	50 (83.3)
7	Washing machine	14 (23.3)	46 (76.7)
8	Computer/Laptop	40 (66.7)	20 (33.3)
9	Inverter	38 (63.3)	22 (33.3)
10	Four-wheeler	44 (73.3)	16 (26.7)
11	Two-wheeler	26 (43.3)	34 (56.7)
12	Bank savings	6 (10)	54 (90)
13	Insurance	30 (50)	30 (50)

Source: Computed

Figures in parentheses represent percentage

Access to housing

Access to housing is divided into housing conditions, satisfactory level on quality of housing, and adequacy of household assets.

Housing conditions

The housing condition is divided into the ownership of the house, type of house, no's of room, type of floor, type of roof, ceiling availability, type of wall, availability of separate kitchen, bathroom and toilet, availability of electricity, LPG and Garage.

Of the total population, 93.33% are the owner of their house. In terms of the type of house, 20.00% live in Pucca house, 76.67% live in semi-pucca, and 3.33% live in Kutcha house. The average number of rooms is 3 rooms per house. 36.67% of families have a concrete floor in their house i.e., cemented floor and 19(63.33%) families have wood. In regards to the type of roof, 96.67% have used tin as their roof, and only 3.33% have a concrete roof. There are 60.00% of houses with the ceiling. The type of wall consisted of concrete walls mainly colored (20%), tile (76.67%), and the wooden wall (3.33%). All households have electricity, bathroom, and toilet with 76.67% having separate kitchen while only 26.67% have Garage. The majority of the population (96.67%) have a gas connection (LPG) (**Table 5**).

Table 5: Housing conditions

SI. No.	Particulars	n=60
I	**Ownership of the house**	
	Rented	4 (6.67)
	Owned	56 (93.33)
II	**Type of house**	
	Pucca	12 (20)
	Semi-pucca	46 (76.67)
	Kutcha	2 (3.33)
III	**Average no's of room**	3
IV	**Type of floor**	
	Concrete	22 (36.67)
	Wood	38 (63.33)
V	**Type of roof**	
	Tin	58 (96.67)
	Concrete	2 (3.33)
VI	**Ceiling**	
	Yes	36 (60)
	No	24 (40)
VII	**Type of wall**	
	Concrete	12 (20)
	Tile	46 (76.67)
	Wood	2 (3.33)
VIII	**Separate kitchen**	
	Yes	46 (76.67)
	No	14 (23.33)
IX	**Bathroom and toilet**	
	Yes	60 (100)
X	**Electricity**	
	Yes	60 (100)
XI	**LPG**	
	Yes	58 (96.67)
	No	2 (3.33)
XII	**Garage**	
	Yes	16 (26.67)
	No	44 (73.33)

Source: Computed

Figures in parentheses represent percentage

Satisfactory level on Quality of housing and adequacy of household assets

The satisfactory level of Quality of housing and adequacy of household assets are measured using criteria such as highly satisfied, satisfied, dissatisfied, and highly dissatisfied.

The mean score for the quality of housing is 2.4 indicating satisfied. The level of satisfaction on the quality of housing is highly satisfied (10%), satisfied (50%), dissatisfied (30%), and highly dissatisfied (10%).

The respondents are satisfied with the adequacy of household assets with a mean score of 2.3. Among which 6.67% are highly satisfied, satisfied (53.33%), dissatisfied (30%), and highly dissatisfied (10.00%) in terms of adequacy of household assets (**Table 6**).

Access to water

Access to water in the community is divided into sources or water and adequacy of water during the dry season.

Sources of water

The sources of water and its uses are divided into Access to safe drinking water, Sources of water for drinking and cooking, water supply sufficiency, quality of water, the quantity of water, sources of water for washing, sources of water for gardening

From the total population, all households have access to safe drinking water. In terms of drinking and cooking 10% of the households depend on rainwater harvesting while the majority (90%) of the households have PHE shared connection. Two-third of the population (66.67%) have sufficient water supply. One-third of the population (33.33%) do not have enough water supply and they are mostly families with 4-6 members. The majority (93.33%) rated satisfactory and only a few (6.67%) rated moderate in terms of the quality of -

Table 6: Satisfactory level on housing

SI. No	Particulars	n=60				
		Highly satisfied	Satisfied	Dissatisfied	Highly dissatisfied	Mean
1	Quality of housing	6 (10)	30 (50)	18 (30)	6 (10)	2.4
2	Adequacy of housing	4 (6.67)	32 (53.33)	18 (30)	6 (10)	2.3

Source: Computed

Figures in parentheses represent percentage

Table 7: Water sources for household

Sl. No.	Particulars	n=60
I	**Access to source of safe drinking water**	
	Yes	60 (100)
II	**Source for drinking and cooking**	
	Rainwater collection	6 (10)
	PHE shared connection	54 (90)
III	**Main household water source**	
	Own property	60 (100)
IV	**Supply sufficiency**	
	Yes	40 (66.67)
	No	20 (33.33)
V	**Quality of water**	
	Satisfactory	56 (93.33)
	Moderate	4 (6.67)
VI	**Perception on quantity of water**	
	Sufficient	24 (40)
	Not sufficient	36 (60)
VII	**Main source of washing**	
	Stream/pond	2 (3.33)
	Rainwater collection	4 (6.67)
	PHE	54 (90)
VIII	**Main source of gardening**	
	Stream/pond	7 (11.67)
	Rainwater collection	16 (26.67)
	Household waste water	37 (61.67)

Source: Computed

Figures in parentheses represent percentage

-water. The quantity of water is sufficient for 40% while it is not sufficient for 60% of the population, particularly during the dry season. The main sources of water for washing are PHE (90%), rainwater (6.67%), and fetching from nearby ponds and streams (3.33%). The sources of water for gardening are household wastewater (62.5%), rainwater (25%), and ponds/streams (12.5%) (**Table 7**).

Adequacy of water during the dry season

The adequacy of water during the dry season (mainly from December-may) is divided into washing, bathing, toilet, cooking, and drinking. They are measured using a four-point scale such as highly adequate, adequate, moderate, inadequate, and highly inadequate.

The adequacy of water for Washing among the population is highly adequate (3.3%), adequate (10%), moderate (63.3%), inadequate (16.7%), and highly inadequate (6.7%) with a mean score of 3.133 indicating moderate. The adequacy of water for bathing is highly adequate (3.3%), adequate (6.7%), moderate (56.7%), inadequate (26.7%), and highly inadequate (6.7%) with a mean score of 3.267 indicating moderate. For toilet usage, water is highly adequate (3.3%), adequate (10%), moderate (53.3%), inadequate (26.7%), and highly inadequate (6.7%) with a mean score of 3.233 indicating moderate. Water for cooking presents highly adequate (3.3%), adequate (13.3%), moderate (66.7%), and inadequate (16.7%) with a mean score of 2.967 indicating adequate. The adequacy of safe drinking water is highly adequate (3.3%), adequate (13.3%), moderate (66.7%), and inadequate (16.7%) with the mean score of 2.967 indicating inadequate (**Table 8**).

Association among the Access to water, housing, and socio-economic Characteristics

The ownership of the house and the type of roof are negatively correlated. The type of house and the type of wall are perfectly correlated where a moderate positive correlation is shown with the availability of separate kitchen and quality of water. The negative correlation is shown in the type of house with the type of roof, Source of water for drinking, cooking, and washing. The availability of ceiling and Source of water for drinking and cooking shows a moderate negative correlation. The access to LPG connection has a moderate negative correlation with the source of water for drinking and cooking. The source of water for drinking and cooking has a high negative correlation with the quality of water. It has a moderate positive correlation with the main source of washing. The supply sufficiency and the perception of the quantity of water are positively correlated. The quality of water has a high negative correlation with the main source of water for washing (**Table 9**).

The Socio-economic status has an association and positively correlated with the type of house, ceiling, and type of wall at a 95 percent level of confidence. The form of family show moderately positive relation with the type of roof and ceiling. The type of house, wall and garage are positively related with the secondary occupation (**Table 10**). The type of family -

Table 8: Adequacy of water

SI. No	Particulars	n=60					
		Highly Adequate	Adequate	Moderate	Inadequate	Highly Inadequate	Mean
1	Washing	2 (3.3)	6 (10)	38 (63.3)	10 (16.7)	4 (6.7)	3.133
2	Bathing	2 (3.3)	4 (6.7)	34 (56.7)	16 (26.7)	4 (6.7)	3.267
3	Toilet	2 (3.3)	6 (10)	32 (53.3)	16 (26.7)	4 (6.7)	3.233
4	Cooking	2 (3.3)	8 (13.3)	40 (66.7)	10 (16.7)	0 (0)	2.967
5	Drinking	2 (3.3)	8 (13.3)	40 (66.7)	10 (16.7)	0 (0)	2.967

Source: Computed

Figures in parentheses represent percentage

Table 9: Access to Housing and Water: Pearson's r

Variable	Ownership of the house	Type of house	Type of roof	Ceiling	Type of wall	Separate kitchen	LPG Connection	Water for drinking and cooking	supply sufficiency	quality of water	perception on quantity	main source of washing
Ownership of the house	1	0.196	-.695**	-0.055	0.196	0.147	0.05	-0.089	0.189	0.071	-0.218	-0.156
Type of house	0.196	1	-0.341	0.15	1.000**	.377*	0.068	-.368*	-0.052	.393*	-0.15	-0.083
Type of roof	-.695**	-0.341	1	0.227	-0.341	-0.102	-0.034	0.062	-0.131	-0.05	0.152	0.248
Ceiling	-0.055	0.15	0.227	1	0.15	0.354	0.227	-.408*	0.144	0.327	-0.028	0.058
Type of wall	0.196	1.000**	-0.341	0.15	1	.377*	0.068	-.368*	-0.052	.393*	-0.15	-0.223
Separate kitchen	0.147	.377*	-0.102	0.354	.377*	1	0.337	-0.342	-0.223	0.169	-0.354	-.459*
LPG Connection	0.05	0.068	-0.034	0.227	0.068	0.337	1	-.557**	-0.131	-0.05	-0.227	-0.197
Garage	-0.161	0.277	0.112	0.031	0.277	-0.024	0.112	-0.201	-0.053	0.161	0.123	0.058
Water for drinking and cooking	-0.089	-.368*	0.062	-.408*	-.368*	-0.342	-.557**	1	0	-.802**	0.181	-0.012
Supply sufficiency	0.189	-0.052	-0.131	0.144	-0.052	-0.223	-0.131	0	1	0.094	.577**	.677**
Quality of water	0.071	.393*	-0.05	0.327	.393*	0.169	-0.05	-.802**	0.094	1	-0.055	-0.276
Perception on quantity of water	-0.218	-0.15	0.152	-0.028	-0.15	-0.354	-0.227	0.181	.577**	-0.055	1	-.856**
main source of washing	-0.083	-.459*	0.058	-0.223	-.459*	-0.197	0.058	.677**	-0.276	-.856**	-0.096	-0.096

Source: computed

*****p<0.01 (2 tailed) * p<0.05 (2 tailed)***

Table 10: Socio-economic Characteristics and Access to Housing: Pearson's r

Variable	Socio economic status	Family Form	Size of Family	Secondary Occupation	Ownership of the house	Type of house	Type of roof	Ceiling	Type of wall	LPG Connection	Garage	Separate kitchen
Socio economic status	1	0.089	-0.293	.544**	-0.267	.368*	0.186	.408*	.368*	0.186	0.302	0.079
Family Form	0.089	1	-0.295	0.183	-0.239	-0.23	.415*	.365*	-0.23	-0.083	0.27	-0.035
Size of Family	-0.293	-0.295	1	-0.045	0.059	-0.081	-0.245	-.479**	-0.081	-.449*	-0.033	-0.035
Secondary Occupation	.544**	0.183	-0.045	1	-0.218	.450*	0.152	0.25	.450*	0.152	.431*	0.129
Ownership of the house	-0.267	-0.239	0.059	-0.218	1	0.196	-.695**	-0.055	0.196	0.05	-0.161	0.147
Type of house	.368*	-0.23	-0.081	.450*	0.196	1	-0.341	0.15	1.000**	0.068	0.277	.377*
Type of roof	0.186	.415*	-0.245	0.152	-.695**	-0.341	1	0.227	-0.341	-0.034	0.112	-0.102
Ceiling	.408*	.365*	-.479**	0.25	-0.055	0.15	0.227	1	0.15	0.227	0.031	0.354
Type of wall	.368*	-0.23	-0.081	.450*	0.196	1.000**	-0.341	0.15	1	0.068	0.277	.377*
LPG Connection	0.186	-0.083	-.449*	0.152	0.05	0.068	-0.034	0.227	0.068	1	0.112	0.337
Garage	0.302	0.27	-0.033	.431*	-0.161	0.277	0.112	0.031	0.277	0.112	1	-0.024
Separate kitchen	0.079	-0.035	-0.035	0.129	0.147	.377*	-0.102	0.354	.377*	0.337	-0.024	1

Source: computed

*****p<0.01 (2 tailed)***

Table 11: Socio-economic Characteristics and Access to Water: Pearson's r

Variable	Socio economic status	Family Type	Size of Family	Occupation	Secondary Occupation	Source of drinking and cooking	Supply sufficiency	Quality of water	Perception on quantity of water	Main source of washing
Socio economic status	1	0	-0.293	0.289	.544**	-0.333	0.141	0.267	0.272	-0.156
Family Type	0	1	0.088	-0.205	-0.055	0.089	.378*	-0.071	0.218	-0.23
Size of Family	-0.293	0.088	1	-0.041	-0.045	.684**	0.156	-.500**	0.254	0.326
Occupation	0.289	-0.205	-0.041	1	0.124	-0.01	-0.112	0.085	-0.112	0.07
Secondary Occupation	.544**	-0.055	-0.045	0.124	1	-0.272	0	0.218	-0.111	-0.096
Source of drinking and cooking	-0.333	0.089	.684**	-0.01	-0.272	1	0	-.802**	0.181	.677**
Supply sufficiency	0.141	.378*	0.156	-0.112	0	0	1	0.094	.577**	-0.276
Quality of water	0.267	-0.071	-.500**	0.085	0.218	-.802**	0.094	1	-0.055	-.856**
Perception on quantity of water	0.272	0.218	0.254	-0.112	-0.111	0.181	.577**	-0.055	1	-0.096
Main source of washing	-0.156	-0.23	0.326	0.07	-0.096	.677**	-0.276	-.856**	-0.096	1

Source: computed

*****p<0.01 (2 tailed) * p<0.05 (2 tailed)***

has positive relationship with supply sufficiency of water. The size of family and the source of water for drinking and cooking are positively correlated where there is negative relation with the quality of water (**Table 11**).

Conclusion

The socio – demographic characteristics highlight the presence of one religion i.e. Christianity with the dominant denomination Baptist Church of Mizoram. The type of family is mostly nuclear family and stable in its forms with a large number of family members. The most common primary occupation is government service where secondary occupation was maintained for additional income. Livestock rearing and farming are the dual practice of many households contributing to the main source of income. Agriculture and allied sector are prevalent among the people and the community highly depend on them for development. The comparatively high amount of medical expenses shows the need for improved health care services and facilities in the community.

The majority of the population is found to have their own house. In terms of the type of houses, it is found that people mostly live in semi-pucca houses with an average number of three rooms in each household. The electricity and toilet are available to all the households, and LPG connection for almost all the households. Housing conditions indicators such as type of houses, floors, roofs, and the number of rooms indicate that housing conditions are moderate in the community. Access to housing mainly depends on household income. The community people are satisfied with the quality of housing as well as the adequacy of household assets they owned.

All households in the community have access to safe drinking water. The majority of the population has a Public Health Engineering (PHE) water connection. However, the importance of practicing rainwater harvesting still needs to be emphasized. An awareness of the control of water usage and reuse of used water for other purposes, apart from gardening, is low among the people in general. Despite the satisfaction in terms of the quality of water, scarcity of safe drinking water remains a big problem, especially during the dry season. The socio-economic status shows a relationship with access to housing where it does not have an association with access to water. Access to housing and access to water are negatively related to the rural community. The socio-economic characteristics has a higher relation with access to housing as compared to access to water.

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