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Housing And Sanitation Conditions-A Case Study Of Village Rajpura-Kharkari, Bhiwani, Haryana (2018)

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ABSTRACT:-

Housing is a basic requirement of human well-being. Along with the requirement of shelter, other facilities in the micro environment of housing such as type of dwelling unit, drinking water, sanitation, hygiene, etc., form vital components of overall quality of life of the population. The survey on drinking water, sanitation, hygiene and housing condition has been designed to collect information on the different aspects of living conditions necessary for decent and healthful living of the household members. Information on these aspects will relate to the household as a whole. On drinking water, important information will be collected on (i) sources and sufficiency of drinking water, (ii) distance to the source of drinking water and (iii) quality of drinking water. On the sanitation facilities, information will be collected on (i) access to latrine, in terms of exclusive use, common use or no access, (ii) type of latrine, (iii) reason for not using latrine for the households which have access to latrine but not using. Some information on micro-environment surrounding the house that will be collected relate to (i) garbage disposal, (ii) drainage arrangement, (iii) problem of flies/mosquitoes. Other information on housing condition like, age of the house, condition of the house, type of the dwelling unit (viz., pucca, semi-pucca and katcha), floor area of the dwelling unit, sources of financing for construction/purchase of houses/flats for residential purpose will also be collected.

Using the information collected in this survey, important indicators of living facilities that can be developed are: proportion of households (i) using improved sources of drinking water, (ii) fetching drinking water from outside premises, (iii) using improved latrine facilities, (iv) having garbage disposal arrangement, (v) having draining arrangement. On the characteristics of the house and dwelling unit, important indicators are (i) proportion of households living in different types of dwelling units, (ii) distribution of the households by age the house, (iii) proportion of households that undertook construction/purchased houses with different sources of finance. These indictors will be developed, at the national and state level, cross classified by level of living of the households, social group, etc.

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INTRODUCTION:

Housing and Sanitation are the key elements in the socio-economic development of a country. Housing is the basic need of a man. As we know, man has three basic needs-

*Food

*Cloth

*House

MEANING AND DEFINITIONS:

- **WHAT IS HOUSE?**

"A house is a building that functions as a home for human and their animals".

The term "House"in India covers that greatest diversity of dwelling. In 1872,

A house was defined as "any permanent structure which land serves or would serve for the accommodation of human being".

According to 1971 census, "House" was defined as a building or part of a building having a separate main entrance from the road or common courtyard or stair case etc.

- **WHAT IS HOUSEHOLD?**

"A house hold consists of one or more people who live in same dwelling and also share meals or living accommodation and may consistsof a single family or some other grouping of people".

"A household includes all the persons who occupy a housing unit.A housing unit is a house, an apartment, a group of rooms, or a single room that is occupied as separate living quarters.

As we know, wealthier member of the community had better housing. The wealthiest households had brick and concrete homes or we can say pacca houses that were painted and had ceramic floor tiles. Poorer households had homes constructed of wood and bamboo or we can say live in kachha houses, which are made from basic brick and concrete,structure, concrete flooring and unpainted.

Wealthier member of the village had a large size of houses in which 5 and above rooms are included, while poorer households have small size of houses in which upto 2 rooms are included.

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- **WHAT IS SANITATION?**

  Sanitation is the hygienic means of promoting health through prevention of human contact with the hazards of wastes as well as the treatment and proper disposal of sewage or waste water. Wastes that can cause health problems include human and animal excreta, solid waste, domestic waste water and agricultural wastes.

- **WHAT IS HYGIENITY?**

  Hygienic means of prevention can be by using engineering solutions (sanitary sewers, sewage treatment, surface runoff management, solid waste management).We measure the houses hygienist as the part of environmental hygienity by these following indicators:

1. Through ventilation
2. Through Cleanliness
3. Through Solid waste disposal management
4. Through water waste disposal management

- **VENTILATION:**

  Ventilation is the act of supplying fresh air and getting rid of foul air. It is a mechanical system in a building that provides fresh air. As we know fresh air is very essential for our life. Every household has a good ventilation facility but in the present village, mostly household had satisfactory ventilation condition while in the lower caste, bad ventilation conditions are found.

- **CLEANLINESS**

  Cleanliness is one of the most important practice for a clean and healthy environment. It may be related to public hygiene or personal hygiene. It is essential for everyone to learn about cleanliness, hygiene sanitation and various disease that are caused due to poor maintenance of hygienic condition. Many diseases can be spread due to bad hygienic conditions like, Dengu fever, Swine flu, Malaria, Chicken pox and Jaundice etc.

- **SOLID WASTE DISPOSAL MANAGEMENT**

  There are various types of solid waste including agricultural wastes, household hazardous wastes, sewage sludge etc. Proper solid waste collection is important forprotection of public health, safety and environmental quality.

  In the present village, mostly people use open space for excreta.

- **WATER WASTE DISPOSAL MANAGEMENT**

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The improper disposal of waste water plays a role in the contamination of surface water, ground water and the soil there by posing health problems. These phenomena persist in developing countries and affect almost every one.Waste water orsewage that generated from a home or community including toilet, bath, laundry, and kitchen-sink wastes and surface run off.

PROFILE OF THE STUDY AREA

The state of Haryana is one of the agriculturally developed states of India. It is composed of 21 districts with a varied topography, Bhiwani district lies in south-western part of Haryana state covering an area of 5140 km^2. There is no perennial river passing through the district. In the name of drainage, the canals developed by the government for irrigation and supply of drinking water exist in the district. The district is comprised of 9 development blocks and 444 villages. For the present study, Rajpura-Kharkari village is selected to conduct a socio-economic survey and prepare reports on different aspects related to the village.

The study area lies in the north-west of the Bhiwani city and covers an area of about 600 acres including the agricultural and *abadideh* land (Figure 1). The study area is about 2 km away on an approach road from the Bhiwani-Jind road and about 5 km away from the Ch. BansiLal University, Bhiwani. The climate of the study area can be classified as tropical steppe, semi -arid and hot which is mainly characterized by extremely dry, hot summer and cold winter except during monsoon season when moist air of oceanic origin penetrate into the district. The climate of the study area is composed of four seasons in a year. The hot weather season starts from mid March to last week of the June followed by the south-west monsoon which lasts up to September. The transition period from September to October forms the post–monsoon season. The winter season starts late in November and remains up to first week of March. The normal annual rainfall of the study area is 420 mm which is unevenly distributed. The number of rainy daysis 22, in a year. The south west monsoon, commence in last week of June and withdraws in end of September, contributing about 85 percent of annual rainfall. July and August are the wettest months of the year. Rest 15 percent rainfall is

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received during non-monsoon period in the wake of westem disturbances and thunder storms.

The study area is consists of flat and level plain. Ground water occurs in alluvium and Aeolian sands andunder lying jointed and fractured hardrock's formations also form theaquifers, in alluvium, sands, silt ,kankkr and gravel form the waterbearing zones. In-shallow aquifers zones, ground water occurs at a depth of about 50 feet below ground level. The study area has one Panchayatghar, one Aanganwari center, two schools (one govemment and one private), one playground, one boxing academy, one drinking water tank (under construction), three ponds and three temples. It also has an area of about 18 acre under forest cover with desikeeker as dominant vegetation.

OBJECTIVES

The objectives of the present study are:

1. To study the socio-economic status of thepeople.
2. To know about sanitation facilities available in the village.
3. To study the management of solid and water waste disposal in rural area according to social, economic and educational level.

HYPOTHESIS

1. Housing and sanitation conditions vary according to high and low social, economic and education status of households.
2. Level of cleanliness and ventilation conditions is high in higher social, economic and education level.

DATA BASE

In the present study, both the primary and secondary sources are used. Primary data is collected with the help of a structured house hold schedule using direct personal interview method. For the purpose, a census survey was conducted. The secondary data was collected from various concerned govt. departments. Census data for the year 2011 was collected from districts statistical office, Bhiwani. The outline boundary of the village was

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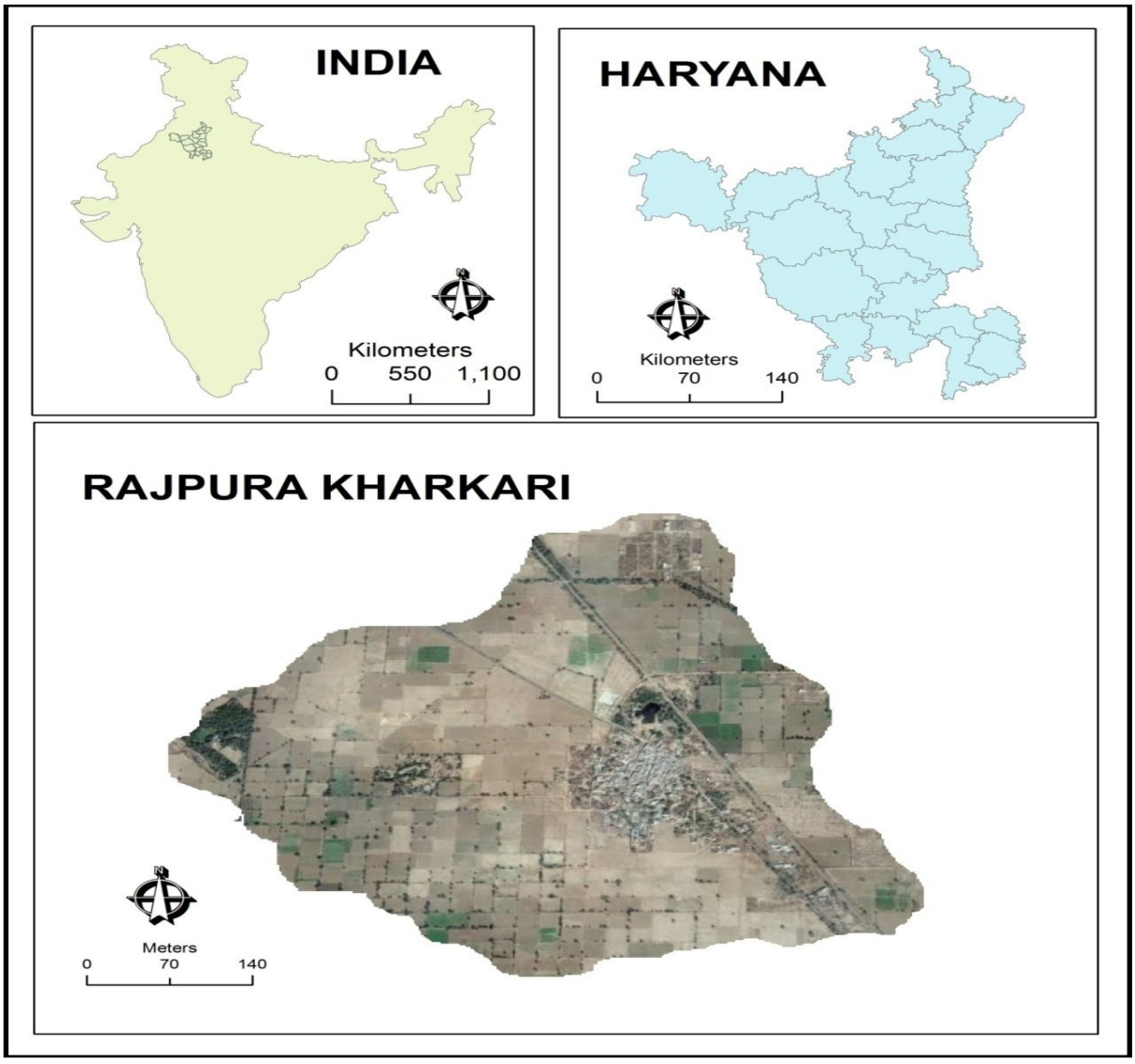
demarcated on the Google earth data with the help of Sajra map collected from revenue department. The number of schools, Anganwari, PanchayatGhar , Community center etc. were acquitted the BDO office.

Figure 1 Location of the Study Area



METHODOLOGY

The housing and sanitation facilities of the households were analyses using the following indicators:

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- Socio-economic characteristics
- Type of houses
- Size of houses
- Kitchen facilities
- Ventilation conditions
- Cleanliness of houses
- Toilet facilities
- Type of toilet
- Solid waste disposal
- Waste water disposal

The social characteristics of each household were assessed based on three castes and categorized as upper, middle and lower castes. The economic characteristics of each household were assessed based on their land owner ship. The households categorized as landless (who do not have on any cultivable land) marginal farmers are the households with a land ownership of up to 2.5 acres; small farmers are those who has a land ownership of 2.5 to 5 acres and households with 5 to 10 acres land ownership are categorized as large farmers. Each indicator was studied according social and economic classes of households. The distribution of each indicator was analyzed using simple percentage methods and diagrams.

Microsoft office package 2010 was utilized for the preparation of tables, diagrams, and report writing. Arc GIS 10.03 was used for the preparation of study area map.

RESULTS AND DISCUSSION

SOCIAL, ECONOMIC AND EDUCATIONAL CHARACTERISTICS OF HOUSEHOLDS AND THEIR HEADS

TABLE-1

It is observed from the table that a total of 194 households exist in the village.This housing survey shows that the 75% of the upper caste people i.e. Brahman and Jaat were major acquire space in Rajpura-Kharkari village. Because of their dominant nature. And remaining 6%taken by middle caste that is (Ahir ,Kumhar, Rajput,Saini,Nai,Jogi) in which ahir,Rajput,Nai,and jogi are the liestone and 17% by lower caste i.e. Chamar,Balmiki, doom,Dhanak etc.

TABLE 2

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Table 2 shows the distribution of households according to their landholding size. It is observed from the table that out of the total of 194 household,79 households do not have any landholding and it is 41% of the total land holding. It reveals that out of 194 households, 30% (59 households) have a land owners ownership. The study revealed that 16% of the farmer holding land above 5 acre and 30%of the marginal farmer occupied 2.5 acre land. Small farmer held land approximately 2.5 acre to 5 acre i.e.12%.

TABLE 3

Table 3 reveals the number of households as per the educational level of their heads.It is the observed that out of total of 194 households, 57 households heads are illiterate that is about the 29% of the total. The analysis further shows that the educational level of the heads of the households led by educated heads up to primary, middle, secondary, senior secondary, graduate & above are 12%, 23%, 18%, 8%, 10% respectively. The study revealed that only 9% of the household were completed their education Up to graduate and the education level of head of the household is 8% at senior secondary level, 17% at secondary level, 22% at middle level and 12% up to primary level .The reason behind of drop out from their formal education and schooling is being out of familial responsibilities and nature of their parents occupation.

Table 1Caste WiseHousehold

Category	House holds	%
Upper caste	147	75.79
Middle caste	13	6.7
Lower caste	34	17.52
Total	194	100

Table 2 Land Holding Size

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Category	House holds	%
Land Less Farmer	79	40.73
Marginal Farmer	59	30.41
Small Farmer	24	12.37
Large	32	16.49
Total	194	100

Table 3Education Level of Head of Household

Category	Households	%
Illiterate	57	29.38
Up to Primary	24	12.37
Middle	44	22.68
Secondary	34	17.53
Senior Secondary	16	8.25
Graduate & above	19	9.79
Total	194	100

TABLE 4

Table 4 shows the distribution of construction type of houses according to their castes in the village. Out of 147 houses of upper caste people, 5% (8 households) have kachha houses, 65% (95 households) preferred to construct semi pacca houses and 29% (44 households) have pacca houses. The analysis further reveals that out of 13 households of middle caste people, 30% (4 households) have kachha houses, 46% (6 households) have semi pacca and only 23% (3 households) have preferred to construct pacca houses. The study revealed that in the present village, most of the families are living in semi paccahouses.In the case of upper caste, mostly people preferred to construct semi pacca houses with 64%. The highest % of pacca houses are found in upper caste with 29%, while lowest% is found in lower caste with 5.88%.

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TABLE 5

Table 5 reveals the construction type of houses according to the economic status of households.In this village, in all the categories of farmers, the highest percentage of people is preferred to construct semi pacca houses. The highest percentage of pacca or well constructed houses is found in small farmers category where out of total 24 households,29% (7 households) people construct pacca houses while lowest percentage of pacca houses is found in landless farmer category where out of 79 households, 22% people construct pacca houses In this village, all the categories (landless, marginal, small , large) majorly have 70% semi pacca houses, and in all the categories have approximately 25% pacca houses.

In the category of landless majorly have 25% kachha houses in comparison to other castes and large farmer have only 3% kachha houses.Thus we see that the semi pacca houses more found in all categories in this village and kucha houses have found lowest in all categories.

This table represents the type of houses according to land holding size.In this village, all the categories (landless, marginal, small, large) majorly have 70% semi pacca houses, and in all the categories have approximately 25% pacca houses.In the category of landless majorly have 25% kachha houses in comparison to other caste and large farmer have only 3% kachha houses.Thus we see that the semi pacca houses more found in all categories in this village and kachha houses have found lowest in all categories.

Table 4 Type of HousesAccording to the Caste

Category	kachha	%	Semi Pacca	%	Pacca	%	Total	%
Upper caste	8	5.44	95	64.62	44	29.94	147	100
Middle caste	4	30.76	6	46.15	3	23.09	13	100
Lower caste	15	44.11	17	50	2	5.89	34	100
Total	27	13.92	118	60.82	49	25.26	194	100

Table 5 Type of House According to the Landholding Size

Category	Kachha	%	Semi Pacca	%	Pacca	%	Total	%
Landless	20	25.31	42	53.16	17	21.53	79	100

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Marginal	6	10.16	36	61.01	17	28.83	59	100
Small	0	0	17	70.83	7	29.17	24	100
Large	1	3.12	23	71.88	8	25	32	100
Total	27	13.92	118	60.82	49	25.26	194	100

Table 6 Type of House According to the Education Level

Category	Kachha	%	Semi Pacca	%	Pacca	%	Total	%
Illiterate	11	19.29	33	57.89	13	22.82	57	100
Up to Primary	6	25	18	75	0	0	24	100
Middle	6	13.63	23	52.27	15	34.1	44	100
Secondary	1	2.94	24	70.58	9	26.48	34	100
Senior Secondary	2	12.5	7	43.75	7	43.75	16	100
Graduate & above	1	5.26	13	68.42	5	26.32	19	100
Total	27	13.92	118	60.82	49	25.26	194	100

TABLE 7

Table 7 shows the distribution size of houses according to the caste in the village. Out of 147 houses of the upper caste people 6% (9 households) have small size of houses in which up to 2 rooms are included, 74% (110 households) preferred to construct medium size houses in which 3 to5 rooms are included and 19% (28 households) have large size of houses in which above 5 rooms are included. The analysis further reveals that out of 13 households of middle caste people, 30% (4 households) have small size of houses, 69% (9 households) have medium size of houses and no household is found containing 5 and above room set.

It is observe from this table that in the present village most of the families are living in median size houses which have 3to5 rooms. In the case of upper and lower caste all the three house type (small, median, large) are observe. While middle caste families are living either in the small size house or medium size house. In all the three classes the maximum percentage

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is found in the case of medium house. In the case of medium and large size house, upper caste family are dominant in this village while highest number of small houses are found in lower caste.

TABLE 8

This table reveals the size of houses according to the land holding size . In this village , in the category of marginal and small farmers have majorly medium houses with approximately 80% in which 3 to 5 rooms included in medium house type and landless and large farmers have approximately 64% of medium houses.In the small houses in which included up to 2 rooms landless farmers have the size of houses majorly with 24% and in the case of marginal , small and large farmers have only 5% small houses in which upto 2 rooms . In the category of large farmers majorly have 31%of large houses in which 5 or above rooms are included and landless farmers have only 8%.

TABLE 9

This table reveals the size of houses according to the education level. In this village, in all the categories maximum people preferred to construct the medium size houses in which 3 to 5 rooms are included. The people who have completed their education at the senior secondary level, majorly preferred to construct the medium size of dwelling with 81% .The people who have completed their education at senior secondary level have least preferred to construct large house in which 5 or above rooms are included with 6.25%.

Table 7 Size of Houses According to the Caste

Category	Up to 2	%	3—5	%	Above-5	%	Total	%
Upper caste	9	6.12	110	74.84	28	19.04	147	100
Middle caste	4	30.77	9	69.23	0	0	13	100
Lower caste	11	32.33	22	64.74	1	2.93	34	100
Total	24	12.37	141	72.68	29	14.95	194	100

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Table 8 Size of House According to the Landholding Size

Category	Up to 2	%	3—5	%	Above-5	%	Total	%
Landless	19	24.5	53	67	7	8.5	79	100
Marginal	2	3.28	48	81.47	9	15.25	59	100
Small	1	4.16	19	79.18	4	16.66	24	100
Large	2	6.25	20	62.5	10	31.25	32	100
Total	24	12.37	140	72.16	30	15.46	194	100

Table 9 Size of Houses According to the Educational Level

Category	Up to 2	%	3--5	%	Above 5	%	Total	%
Illiterate	9	15.79	44	77.19	4	7.02	57	100
Up to Primary	7	29.16	16	66.66	1	4.18	24	100
Middle	2	4.54	28	63.63	14	31.83	44	100
Secondary	2	5.88	27	79.41	5	14.71	34	100
Senior Secondary	2	12.5	13	81.25	1	6.25	16	100
Graduate & above	2	10.52	12	63.16	5	26.32	19	100
Total	24	12.37	140	72.16	30	15.46	194	100

TABLE 10

Table 10 shows that the distribution of kitchen facility in houses according to their castes in the village. Out of 147 houses of upper caste people, 88% (130 households) have separate kitchen facility, 11% (17 households) have open kitchen facility. The analysis further reveals that out of 13 household of middle caste people, 46% (6 households) have separate kitchen facility and 53% (7 households) preferred to use open kitchen. In the lower caste 64% (22 households) people have the open kitchen facility and only 35% (12 households) have

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separate kitchen facility. In the upper caste people, they have preferred to use separate kitchen facility but the remaining two castes preferred to use open kitchen facility.It is observed from this table that in the present village, most of the families have separate kitchen facilities. In the case of upper and lower caste, all the two type of kitchen facilities (open and separate) are observed. While middle caste families have open and separate kitchen facilities with 50%. In all the three classes the maximum percentage is found of separate kitchen facilities.

TABLE 11

This table shows the distribution of kitchen facilities according to of land-holding size. In this village, all the categories in which marginal, small and large farmers have the separate kitchen facility. In the case of marginal, small, and large farmers approximately 85% and above have the separate kitchen facility while in the categories of landless farmers 40% have open kitchen facility. Among all the classes, the highest percentage of separate kitchen facility is found in marginal and large farmer with 90% .In the case of using open kitchen facility, the category of landless farmer are dominant in the village with 40%.

TABLE 12

This table reveals the kitchen facility according toeducation level.

In the case of illiterate persons, and who have completed their education up toprimary level approximate 60% have the kitchen facility separately, while other categories like who have completed their education up to middle level, secondary level, senior secondary level and graduation and above graduation, mostly people have the separate kitchen with 90% and above.

Here, we see that as the level of education increases the percentage of separate kitchen facility is also found higher. In the illiterate category of people and who have completed their education up to primary level have majorly use the open kitchen in the comparison of other categories with 40%.

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Table 10 Kitchen Facility According tothe Caste

Category	Open	%	Separate	%	Total	%
Upper caste	17	11.56	130	88.44	147	100
Middle caste	7	53.84	6	46.16	13	100
Lower caste	22	64.7	12	35.3	34	100
Total	46	23.71	148	76.29	194	100

Table 11 Kitchen Facility according to the Landholding size

Category	Open	%	Separate	%	Total	%
Landless	32	40.51	47	59.49	79	100
Marginal	5	8.47	54	91.53	59	100
Small	5	20.83	19	79.17	24	100
Large	4	12.5	28	87.5	32	100
Total	46	23.71	148	76.29	194	100

Table 12 Kitchen Facility according to the Educational Level

Category	Open	%	Separate	%	Total	%
Illiterate	23	40.35	34	59.65	57	100
Up to Primary	10	41.66	14	58.34	24	100
Middle	8	18.18	36	81.82	44	100
Secondary	3	8.82	31	91.18	34	100
Senior Secondary	1	6.25	15	93.75	16	100
Graduate & above	1	5.26	18	94.74	19	100
Total	46	23.71	148	76.29	194	100

TABLE 13

Table 13 shows that the distribution of ventilation condition in houses according to their caste in the village. Out of 147 houses of upper caste people, 45% (67 households) have good ventilation condition, 50% (74 households) have satisfactory ventilation condition and only

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4% (6 households) have bad ventilation condition. The analysis further reveals that out of 13 households of middle caste people, 13%(4 households) have both satisfactory and bad ventilation condition. In the lower caste 55% (19 household) have bad ventilation condition. We see that in this table upper caste people majorly have satisfactory ventilation condition and middle caste have good ventilation condition and lower caste have bad ventilation conditions.

TABLE 14

This table represents the ventilation condition according to the land-holding size. In this village, in the category of land less farmer 40% have the bed ventilation condition in their houses. The highest percentage of bad ventilation condition are found in the category of large farmers with 53% . While lowest percentage of bad ventilation is found in landless farmers category. Here, highest percentage of good ventilation condition is found in marginal category while lowest percentage of ventilation condition is found in small farmers category.

TABLE 15

Shows the ventilation condition according to the education level. In the case of illiterate person, and who have completed their education up to primary level approximately have bad ventilation condition with 40% and 62.5% respectively, While other categories like who have completed their education up to middle level and senior secondary level have good ventilation condition with 60% . Here, we see that as the level of education increases the percentage of good ventilation condition is also found higher.

In the illiterate category of people and who have completed their education up to primary level have majorly bad ventilation condition in comparison of other categories.

Table 13 Ventilation Condition According to the Caste

Category	Good	%	Satisfactory	%	Bad	%	Total	%
Upper caste	67	45.57	74	50.34	6	4.09	147	100
Middle caste	5	38.46	4	30.76	4	30.78	13	100
Lower caste	3	8.82	12	35.29	19	55.89	34	100
Total	75	38.66	90	46.39	29	14.95	194	100

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Table 14 Ventilation Condition According to the Land-Holding Size

Category	Good	%	Satisfactory	%	Bad	%	Total	%
Landless	22	27.84	25	31.64	32	40.52	79	100
Marginal	31	52.54	2	3.38	26	44.08	59	100
Small	8	33.33	1	4.16	15	62.51	24	100
Large	14	43.75	1	3.12	17	53.13	32	100
Total	75	38.66	29	14.95	90	46.39	194	100

Table 15 Ventilation Condition According to the Educational Level

Category	Good	%	Satisfactory	%	Bad	%	Total	%
Illiterate	20	35.08	14	24.56	23	40.36	57	100
Up to Primary	3	12.5	6	25	15	62.5	24	100
Middle	23	52.27	3	6.81	18	40.92	44	100
Secondary	13	38.23	2	5.88	19	55.89	34	100
Senior Secondary	10	62.5	2	12.5	4	25	16	100
Graduate & above	6	31.57	2	10.52	11	57.91	19	100
Total	75	38.66	29	14.95	90	46.39	194	100

TABLE 16

Table 16 shows the distribution of cleanliness according to caste in the village. Out of147 houses of upper caste people, 47% (7 households) have satisfactory cleanliness of houses. The analysis further reveals that,out of 13 household of middle caste people, 38% (5 household) have good and satisfactory cleanliness of houses in the lower caste 50% (17 households) have satisfactory cleanliness of houses and only 8% (3 households) have good cleanliness of houses. At last we see that the upper caste preferred to good and bad cleanliness of houses and middle caste preferred to good and satisfactory cleanliness of

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houses and in the lower caste preferred to satisfactory cleanliness of houses.It is observed from the table 16 that in the present village most of the families have good cleanliness of houses. In the case of upper caste both the good and bad cleanliness of hoses are found with 47.61% and in the middle caste people have good cleanliness of house with 47.61%. But in the lower caste they have satisfactory cleanliness of houses with 50%.

TABLE 17

Table 17 represents the cleanliness of houses according to land holding size. It is observed that out of total 79 households of landless farmer 33% (26 households) have good cleanliness,30%(24 household) have satisfactory and 37% (29 households) have bad cleanliness in their houses . The highest percentage of good cleanliness is found in the category of large farmers while bad cleanliness is found in the category of small farmers. In the present village lowest percentage of bad cleanliness is found in the category of landless farmers with 36%, while highest percentage of bad cleanliness is found in the category of small farmers with 71%. The highest percentage of satisfactory cleanliness is found in landless farmers category with 30.37% while lowest is found in small farmers category.

TABLE 18

This table shows cleanliness of houses according to education level. In case of people who have completed their education at middle and senior secondary level majorly 60% people have good cleanliness of house and the people who have completed their education up to primary level only 8 percent have good cleanliness of houses. The illiterate person have majorly 26% satisfactory cleanliness and the people who have completed their education at secondary level only 5% have satisfactory cleanliness of houses. The people who have completed their education up to primary level majorly 66% have bad cleanliness of houses and the people who have completed their education at senior secondary level only 31% have cleanliness of houses.

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Table 16 Cleanliness of Houses According to the Caste

Category	Good	%	Satisfactory	%	Bad	%	Total	%
Upper caste	70	47.61	7	4.76	70	47.63	147	100
Middle caste	5	38.46	5	38.46	3	23.08	13	100
Lower caste	3	8.82	17	50	4	41.18	34	100
Total	78	40.21	29	14.95	77	39.69	194	100

Table 17 Cleanliness of Houses According to the Land-Holding Size

Category	Good	%	Satisfactory	%	Bad	%	Total	%
Landless	26	32.91	24	30.37	29	36.72	79	100
Marginal	29	49.15	2	3.38	28	47.47	59	100
Small	6	25	1	4.16	17	70.84	24	100
Large	17	53.12	2	6.25	13	40.63	32	100
Total	78	40.21	29	14.95	87	44.85	194	100

Table 18 Cleanliness of Houses According to the Educational Level

Category	Good	%	Satisfactory	%	Bad	%	Total	%
Illiterate	17	29.82	15	26.31	25	43.87	57	100
Up to Primary	2	8.33	6	25	16	66.67	24	100
Middle	26	59.09	3	6.81	15	34.1	44	100
Secondary	16	47.05	2	5.88	16	47.07	34	100
Senior Secondary	10	62.5	1	6.25	5	31.25	16	100
Graduate &above	7	36.84	2	10.52	10	52.64	19	100
Tolal	78	40.21	29	14.95	87	44.85	194	100

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TABLE 19

In all categories of education the people who have completed their education at senior secondary level , majorly 62% people have good cleanliness of houses and only 8% illiterate persons have bad sanitations in their houses.In the category lower caste people,mostly house hold have the toilet facility with 85% and remaining 15% people of lower caste have no toilet facility in their houses.

TABLE 20

This table represents the toilet facility according to the landholding size. In the case of illiterate persons, the people who have completed their education up to primary and senior secondary level 90% and above have toilet facility and approximately 8% have no toilet facility in their houses. And the people who have completed their education middle, secondary, graduation and above majorly have toilet facility in their houses.

TABLE 21

This table represents the toilet facility according to the education level. In the case of illiterate persons, the people who have completed their education up to primary and senior secondary level 90% and above have toilet facility and approximately 8% have no toilet facility in their houses. And the people who have completed their education middle, secondary, graduation and above majorly have toilet facility in their houses.

TABLE 22

Table 22 shows the distributions toilet type according to caste in village. Out of 147 house of upper caste people, 60% (89 households) dry type toilet, 37% (55 households) have flush type of toilet, only 12% (3 households) have no toilet facilities in their houses. The analysis further reveals that, out of 13 households of middle caste people, 61% (8 households) have dry type of toilet and only 38% (5 households) have flush type of toilet. In the lower caste people, 73% (25 households) have dry type toilet and 14% (5 households) have flush types of

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toilet and only 11% (4 households) have no facilities of toilet in houses. At last we see that all the castes preferred to dry type of toilet.

Table 19 Toilet Facility According to the Caste

Category	Yes	%	No	%	Total	%
Upper caste	142	96.59	5	3.41	147	100
Middle caste	13	100	0	0	13	100
Lower caste	29	85.21	5	14.79	34	100
Total	184	94.85	10	5.15	194	100

Table 20 Toilet FacilityAccording to the Land-Holding Size

Category	Yes	%	No	%	Total	%
Landless	73	92.4	6	7.6	79	100
Marginal	55	93.22	4	6.78	59	100
Small	24	100	0	0	24	100
Large	32	100	0	0	32	100
Total	184	94.85	10	5.15	194	100

Table 21 Toilet Facility According to the Education Level

Category	Yes	%	No	%	Total	%
Illiterate	52	91.22	5	8.78	57	100
Up to Primary	22	91.66	2	8.34	24	100
Middle	43	97.23	1	2.77	44	100
Secondary	33	97.21	1	2.79	34	100
Senior Secondary	15	93.75	1	6.25	16	100
Graduate & above	19	100	0	0	19	100
Total	184	94.85	10	5.15	194	100

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TABLE 23

Table 23 represents the type of toilet according to the economic status of households. In all categories of people are preferred to used the dry type of toilet. The highest percentage of dry type of toilet is found in marginal farmers category where out of total 59 households 68% (40 households) people while lowest percentage of dry type of toilet is found in large farmers category where out of 32 households 59%(19 households) people have dry type of toilet.

Thus we says that flush type of toilet is found lowest in this village and this facility highest found in large farmers category.

TABLE 24

This table shows the type of toilet according to education level. In case of illiterate and the people who have completed their education at middle level the facility of dry toilet with 68%. And the people who have completed their education at secondary and senior secondary level approximately 55% have dry toilet facility facility in their houses. While the graduate and above level with 36% and majorly 63% have used flush toilet.

Here we see that as the level of education increases the percentage of flush toilet is also found higher.

TABLE 25

Table 25 shows the distribution of solid waste disposal according to castes in the village out of 147 houses of upper caste people 97% (143 household) preferred to use open solid waste disposal. The analysts further reveals that out of 13households of middle caste people,84 percent (11households) used open solid waste disposal, and only 15 percent (2 households) used other solid waste disposal. In the lower caste 94 percent (32 households) preferred to used open solid waste disposal and only 5percent (2households) have used other solid waste disposal .at last we see that in all the categories preferred to used open solid waste disposal

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Table 22 Type of Toilet According to the Caste

Category	N.A	%	Dry	%	Flush	%	Total	%
Upper caste	3	12.04	89	60.54	55	27.42	147	100
Middle caste	0	0	8	61.53	5	38.47	13	100
Lower caste	4	11.76	25	73.52	5	14.72	34	100
Total	7	3.61	122	62.89	65	33.51	194	100

Table 23 Type of Toilet According to the Land-Holding

Category	N.A	%	Dry	%	Flush	%	Total	%
Landless	5	6.32	48	60.75	26	32.93	79	100
Marginal	2	3.38	40	67.79	17	28.83	59	100
Small	0	0	15	62.5	9	37.5	24	100
Large	0	0	19	59.37	13	40.63	32	100
Total	7	3.61	122	62.89	65	33.51	194	100

Table 24 Type of ToiletAccording to the Educational Level

Category	N.A	%	Dry	%	Flush	%	Total	%
Illiterate	4	7.01	39	68.42	14	24.57	57	100
Up to Primary	2	8.33	19	79.16	3	12.51	24	100
Middle	0	0	30	68.18	14	31.82	44	100
Secondary	0	0	18	52.94	16	47.06	34	100
Senior Secondary	1	6.25	9	56.25	6	37.5	16	100
Graduate & above	0	0	7	36.84	12	63.16	19	100
Total	7	3.61	122	62.89	65	33.51	194	100

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TABLE 26

This table studied the solid waste disposal according to landholding size. In all categories farmers, the highest preferred to open solid waste disposal. The highest percentage of open solid waste disposal is found in large farmers category where out of total 32 household 100% (32 households) people while lowest percentage of open solid waste disposal is found in small farmers category where out of 24 households 91% (22 households) people to adopt the open waste disposal. Thus we can see that in all categories the open solid waste disposal is used more.

TABLE 27

This table represents the solid waste disposal according to education level.

The people who have completed and middle level have majorly used open solid waste disposal with 100%.

And in the case of other categories 90% and above have open solid waste disposal and remaining people have use other solid waste disposal. Thus we see that in all categories mostly people have to use the open solid waste disposal.

TABLE 28

It is observed from the table 28 that in the present village most of the families used waste water disposal in open. In the case of upper caste 88% people used the waste water disposal in open and seaming 12% people used the closed type of waste water disposal.

Only 7.69% of middle caste people used the closed type of waste water disposal

TABLE 29

This table represents the waste water disposal according to of land holding sizeIn all categories mostly farmers 90% use the open waste water disposal and approximately 15% farmer used closed waste water disposal.

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Among all the classes the highest percentage of using open waste water disposal is found in marginal farmers with 94%. And in the case of using closed waste water disposal the category of small farmers have with 20%.

Table 25 Solid Waste Disposal According to the Caste

Category	Open	%	Other	%	Total	%
Upper caste	143	97.27	4	2.73	147	100
Middle caste	11	84.61	2	15.39	13	100
Lower caste	32	94.11	2	5.89	34	100
Total	186	95.88	8	4.12	194	100

Table 26 Solid Waste Disposal According to the Land Holding

Category	Open	%	Other	%	Total	%
Landless	74	93.67	5	6.33	79	100
Marginal	58	98.3	1	1.7	59	100
Small	22	91.66	2	8.34	24	100
Large	32	100	0	0	32	100
Total	186	95.88	8	4.12	194	100

Table 27 Solid Waste Disposal According to the Educational Level

Category	Open	%	Other	%	Total	%
Illiterate	53	92.98	4	7.02	57	100
Up to Primary	24	100	0	0	24	100
Middle	44	100	0	0	44	100
Secondary	33	97.05	1	2.95	34	100
Senior Secondary	15	93.75	1	6.25	16	100
Graduate & above	17	89.47	2	10.53	19	100
Total	186	95.88	8	4.12	194	100

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Table 28 WasteWater Disposal According to the Caste

Category	Open	%	Closed	%	Total	%
Upper caste	130	88.43	17	11.57	147	100
Middle caste	12	92.5	1	7.5	13	100
Lower caste	31	91.17	3	8.83	34	100
Total	173	89.18	21	10.82	194	100

Table 29 Waste Water Disposal According to the Land-Holding Size

Category	Open	%	Closed	%	Total	%
Landless	71	89.87	8	10.13	79	100
Marginal	56	94.91	3	5.09	59	100
Small	19	79.16	5	20.84	24	100
Large	27	84.37	5	15.63	32	100
Total	173	89.18	21	10.82	194	100

Table 30 Waste Water Disposal According to the Educational Level

Category	Open	%	Closed	%	Total	%
Illiterate	53	92.98	4	7.02	57	100
Up to Primary	23	95.83	1	4.17	24	100
Middle	38	86.36	6	13.64	44	100
Secondary	28	82.35	6	17.65	34	100
Senior Secondary	16	100	0	0	16	100
Graduate & above	15	78.94	4	21.06	19	100
Total	173	89.18	21	10.82	194	100

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TABLE 30

This table shows that the people who have completed their education up to primary level and up to senior secondary level, majorly used open waste water disposal with 100%.

And graduate and above level people have used open waste water disposal with 78% and 21% have used closed waste water disposal. And those people who have completed their education up to senior secondary level have not closed waste water disposal.

FINDINGS-

The first hypothesis of the study that housing and sanitation condition vary according to high and low social, economic and education status of households is proved true. It is observed from the analysis that the number pacca houses and big houses are found more in upper social, economic and education classes. On the other hand, number of kachha houses and small houses are found more in lower social, economic and education level of households.

The second hypothesis of the study that level of cleanliness and ventilation condition is tend to be high in higher social, economic and education status of households is proved true. It is observed from the analysis that the cleanliness and ventilation condition are found more in higher social, economic and education status of households.

Conclusion-

It is observed from the survey that Brahman's caste is dominated in the village with 146 households out of a total of 194 households. Here, 41% people have no land ownership and only 16% people have the landholdings above 5 acre, in the village mostly people engaged in agriculture activities.

The educational level of the people, in this village, is also not so good, only 10% people completed their education up to graduation. In all the three castes, mostly people preferred construct semi- pacca houses and mostly people have medium size of houses in which 3 to 5 rooms are included. The highest percent of those people who have the big size of houses, are found in the category of large farmers.

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On the other hand, satisfactory ventilation conditions are found in this village. Here, out of the total 194 households, 148 households have the separate kitchen facility while remaining 46 households have open kitchen facility in their houses. In the upper caste, 88 % people have separate kitchen facility in their houses, while in the lower caste of people, 65% have use open kitchen. It is observed from the survey that as the educational level of people increases, they are more aware to have the separate kitchen facility in their houses because in the category of graduate people, 95% have the separate kitchen facility. Satisfactory ventilation conditions are also seen in this village. In all categories of castes, out of 194 households, only 75(38%) households have good ventilation conditions.

Here, people are much more aware about the facility of toilet in their houses. Out of the total of 194 households, 184 (95%) households have toilet facility. In the middle caste of people (Ahir, Kumhar, Nai, Jogi, Saini) 100% have the toilet facility in their houses. Here, mostly people use to dry type of toilet in their houses. The toilet with flush facility is mostly used in upper caste with 37% otherwise almost people use dry type of toilet. Here, we see that as the education level of people increase, they are much aware to use flush type of toilet while mostly illiterate people use dry type of toilet. In all the three categories of caste (Upper, Middle and Lower) 90% people use the open space for the solid waste of their houses.

Reference-

1. **PRIMARY DATA OF PREM NAGAR (BHIWANI) 2018**
2. **GTZ:Sustainable Sanitation in India. rakshapasad from Dombivli Cooperation, November 2008.**
3. **https://economictimes.indiatimes.com/news/economy/agriculture/india-israel-cooperation-on-water-management/articleshow/61767010.cms**
4. **Institute of Development Studies:Community-led total sanitation:India**
5. **Ministry of Rural Development, Department of Drinking Water Supply:SwajaldharaArchived 10 May 2010 at the Wayback Machine, updated on 31 March 2009. Retrieved 15 April 2010.**

ISSN:0971-1260

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6. **Asian Development Bank:2007 Benchmarking and Data Book of Water Utilities in India, 2007, p. 3**
7. **National Institute of Urban Affairs: Status of Water Supply, Sanitation and Solid Waste Management, 2005, p. xix–xxvi.**
8. **OECD, 2007:Measuring Aid to Water Supply and Sanitation Archived 25 May 2010 at the Wayback Machine, p. 3**
9. **New steps to make Swachh Bharat, or Clean India Campaign, a reality". IRC - Supporting water, sanitation and hygiene services for life. 17 December 2015. Retrieved 28 July 2016**
10. **Planning Commission of India:India Assessment 2002, Water Supply and Sanitation, a WHO-UNICEF sponsored study, 2003, p. 51-53**
11. ***Swachh Bharat Abhiyan Report Stats, 12 September 2017, archived from the original on 28 September 2017***