

**MORBIDITY AND HEALTH CARE AMONG URBAN
POOR: A STUDY OF KUSUMPUR PAHARI, VASANT
VIHAR, NEW DELHI**

*Dissertation Submitted to Jawaharlal Nehru University in Partial
fulfillment of the requirement for the award of the degree of*

MASTER OF PHILOSOPHY

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This dissertation entitled, “**Morbidity and Health Care Among Urban Poor: A Study of Kusumpur Pahari, Vasant Vihar, New Delhi**” is submitted in partial fulfillment of the requirements for the award of the degree of Master of Philosophy, of Jawaharlal Nehru University. This dissertation has not been submitted for any other degree of this University or any other University and is my original work.

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List of Abbreviations

ANC	Ante Natal Care
AWC	Anganwadi Center
AWH	Anganwadi Helper
AWW	Anganwadi workers
BPL	Blow poverty line
BCG	Bacillus Calmette Guerin'
CDGR	Centre for Global Development Research
DDA	Delhi Development Authority
DPT	Diphtheria, Pertussis (whooping cough), tetanus
MSPI	Ministry of Statistics and Programme Implementation
MOHFW	Ministry of Health and Family Welfare
MCD	Municipal Corporation of Delhi
GOI	Government of India
GDP	Gross Domestic Product
IIPS	International Institute for Population Sciences
ICDS	Integrated Child Development Services
TBA	Traditional Birth Attendant
NSS	National Sample Survey
NCT	National Capital Territory

NFHS	National Family and Health Survey
NGO	Nongovernmental organization
NIUA	National Institute of Urban Affairs
TB	Tuberculosis
OOP	Out of Pocket
OPD	Out Patient Department
SPSS	Statistical Package for Social Sciences.
UN	United Nation
USAID U.S	U.S. Agency for International Development
WHO	World Health Organization

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Chapter 1

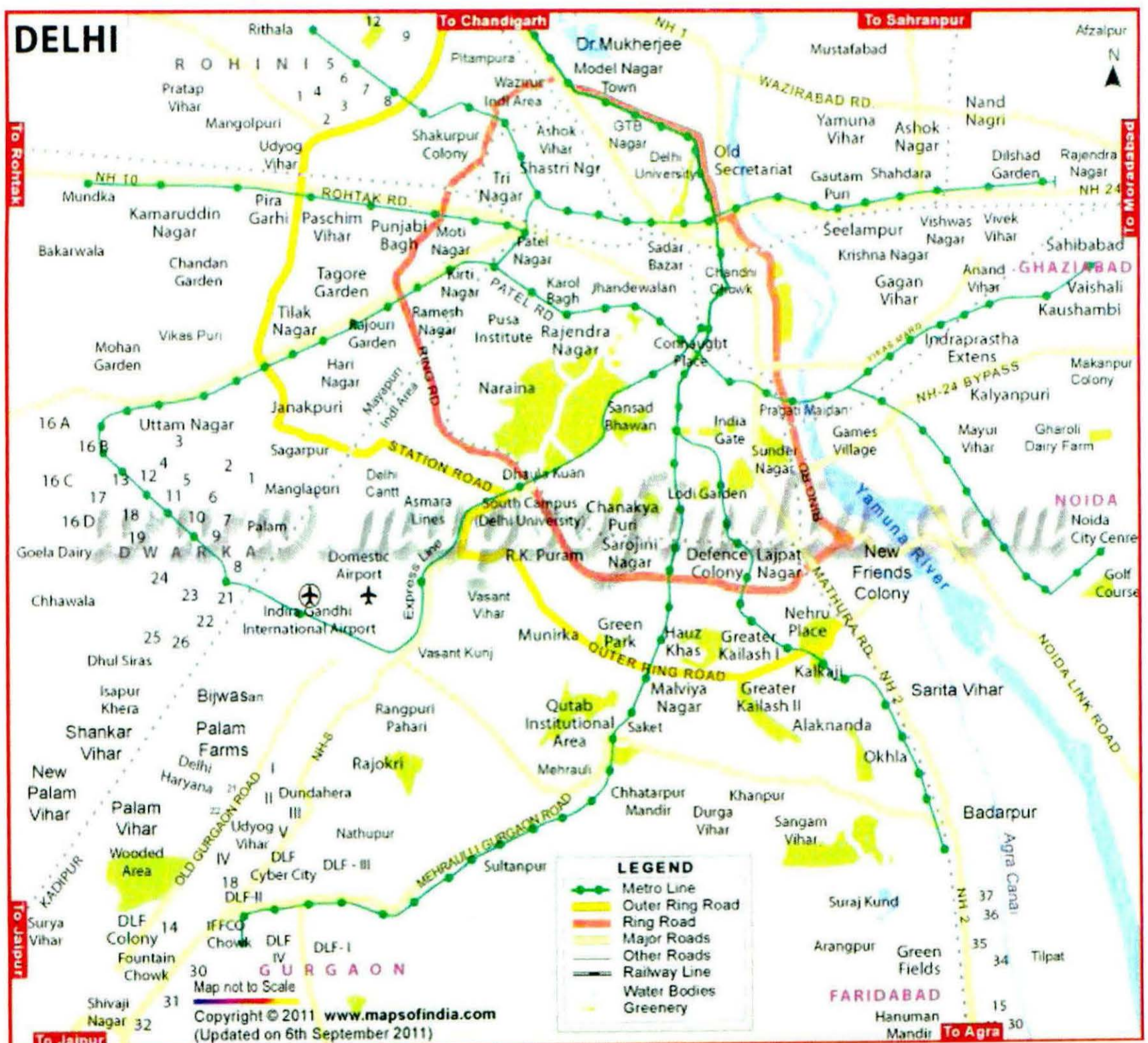
Introduction

CHAPTER -I

INTRODUCTION

Urbanization is occurring at a fast pace in India. Most cities are experiencing the outcome of this. In Delhi out of total population, 97 per cent lives in urban areas of which urban poor and slum population is a large proportion. Living condition, basic facilities and infrastructure for them are very poor. Environmental health conditions (water and sanitation, indoor and outdoor air pollution) are also poor in slums. This often contributes to illness and morbidity.

Figure 1.1: Map of Delhi



Source: <http://www.mapsofindia.com/maps/delhi/>

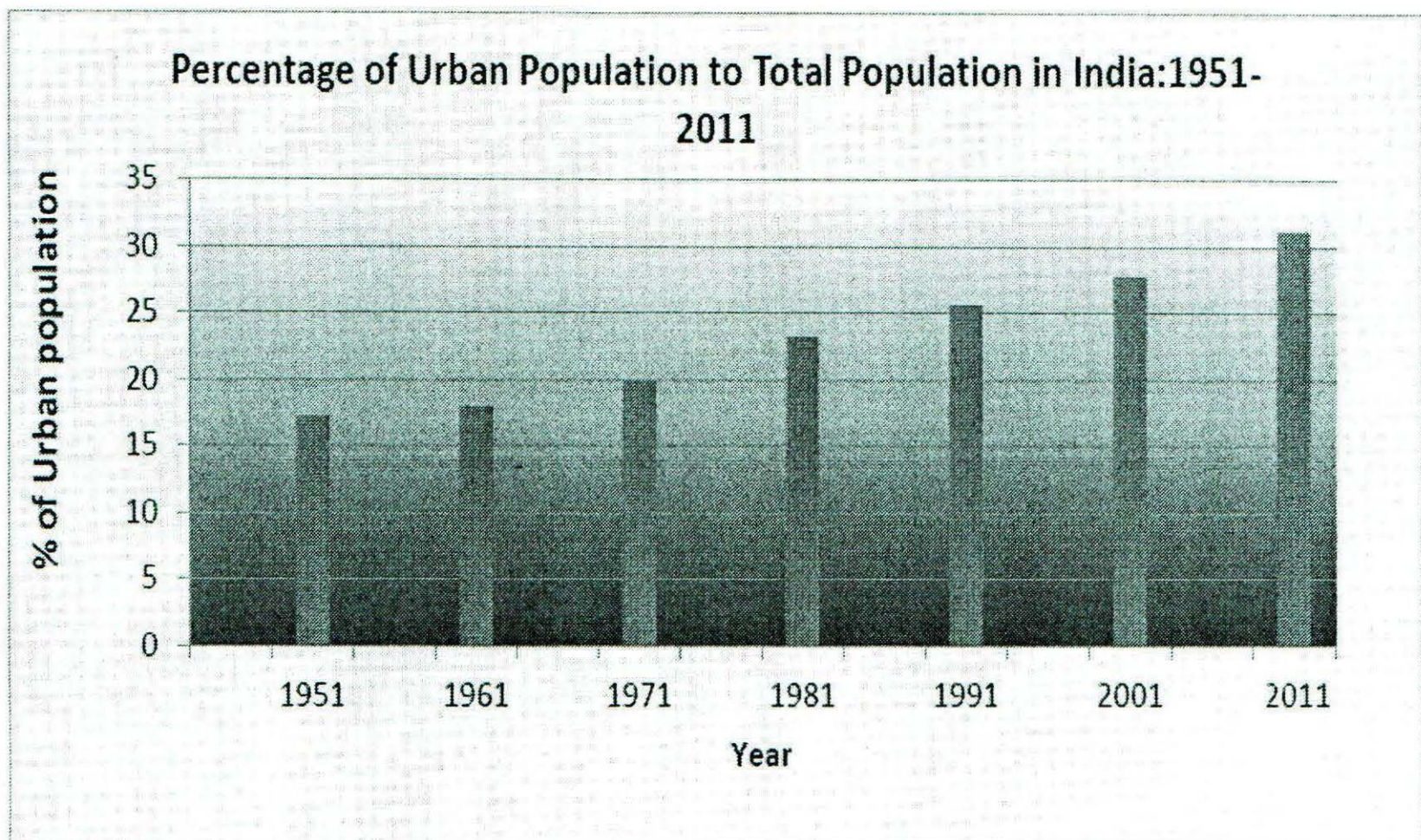
A large number of India's urban population (4.26 crore) live in slums. During 1991 - 2001, population of India grew at an average rate of 2 percent per annum, the urban

population grew at 3 percent, mega cities grew at 4 percent, and slum populations increased by 5 percent. Around 50% of slums are not notified. However NSSO 58th round (2002) also reports 49.4% non-notified slums in India. Urban growth has led to rapid increase in the number of urban poor. In-migration and a floating population have worsened the situation (NFHS 2001). There is considerable migration from rural areas to urban areas. This migration is due to less employment and low wage in rural area. Temporary and recent migrants face greater difficulties in accessing services, difficult to track for follow-up of health services. Due to globalization and high-end technology used in manufacturing, small scale cottage industries in rural areas have been closed. Factors that promoted urbanization are Industrial Revolution, Switch from cottage industries to factories and Development of transportation.

All these have caused more people to migrate to urban areas in search for jobs and jobs paying higher salaries. However once they arrive in urban areas they find the place new and are unaware of the way of life in urban centers. Their education level is low and the labour force is largely unskilled, so they get jobs which mainly involve manual labour as per their education and skill. Due to these factors they earn very less. They cannot afford to pay rent and hence they have to live in slum areas. Their income is so low that they can only pay for their food and hence there is compromise in living condition. They cannot afford to have better sanitary conditions, cleanliness, hygiene and sanitation. Basic facilities like safe drinking water and waste disposal are not available. Environmental health conditions (water and sanitation, indoor and outdoor air pollution) are also poor in slum areas. As a result morbidity is high. Factors that prominently affect health condition in slum population are economic conditions, social conditions, living environment, access and use of public health care services and rapid mobility. These factors affect hidden and unlisted slums even worse than others.

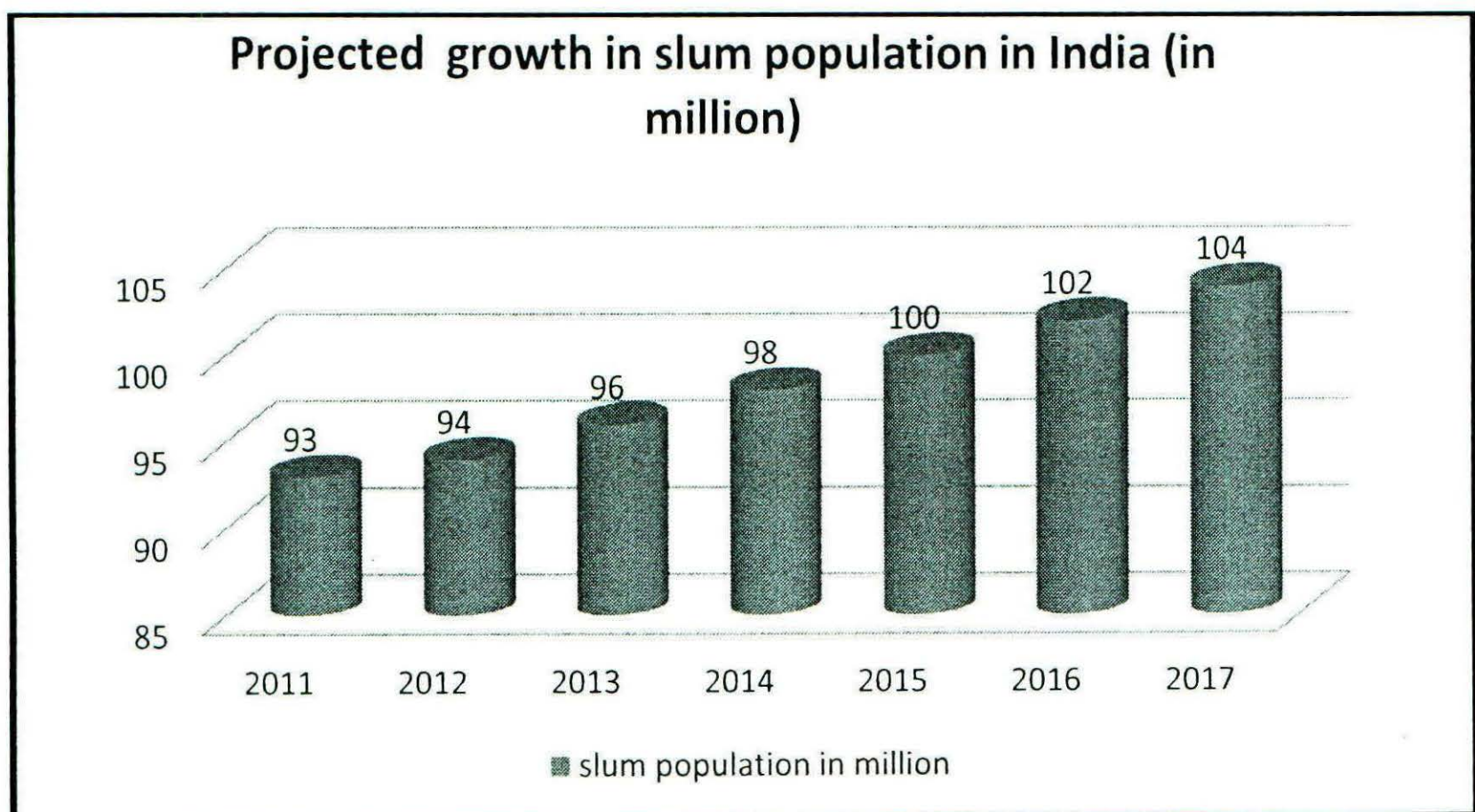
The condition of living, hygiene and sanitation in urban slum is a matter of great concern. Increase in slum population is associated with worsening of living conditions and increase in poverty (NFHS 2006). Hence it is important to study the lives of people in slums.

Figure- 1.2: Percentage of urban population to total population in India 1951-2011



Source- Ministry of Statistics and Programme Implementation, GoI (2011).

Figure- 1.3: Projected Growth in Slum population in India from 2011 - 2017



Source- GOI, 2010, pp.22.

After independence from 1951 in India population had a steep rise. In 1901 India's population was 238.40million and 1951 India's population was 361.09million. But after independence, India's population more than doubled in the next fifty years. In

1991 it was 846.42million. According to census provisional data for 2011 India's population is 1210.19million (census provisional, 2011). Urban population as a percentage of total population has also been increasing over the years. In 1951 it was over 15 % (but less than 20 %). This increased to over 30 % in 2011 (Figure 1.2). This means that urban population had almost doubled since independence (GOI, 2011). Slum population has also been increasing over the years. According to the Report of the Committee on Slum Statistics, as per 2001 census, 26.31 percent of the urban population in India was living in slums. In Delhi 23, 18,635 people were living in slums. In other words 17.97 % of the urban population of Delhi was living in slums. Haryana has the highest percentage of slum population out of total urban population in the state. Slum population is 38.43 % of the urban population of Haryana (GOI, 2010). The population of slum population is projected to grow (Figure 1.3). From about 93 million in 2011 it is expected to go up to more than 104 million in 2017 (GoI,2010).

Studies indicate that the prevalence of diseases (pneumonia, diarrhea, malaria, measles and HIV/AIDS) in urban slums is due to bad living conditions rather than income levels. For example there is lack of safe drinking water and pit latrines shared by thousands of people. Children from the slums with higher income group have higher rates of diarrhea than children of poorest rural families because they are exposed to contaminated water and food. This is because living condition in slums are much poorer than that in villages. Poor living in slums have to face overcrowding, open drains and lack of any sanitation or open space. Due to larger number of people living in a small place, more waste is generated than in villages. But there is no facility for proper waste disposal in slums. Pneumonia and diarrhea each kill more than 2 million children in developing countries annually. Higher the prevalence of slums in the cities, greater will be the prevalence of diarrheal infections among the urban population (UN-HABITAT, 2006-07).

The 'State of Urban Health in Delhi' (2007) shows that neonatal, infant and child mortality (number of children less than 5 year's age) rates among the urban poor in Delhi are amongst the highest in the country. The neonatal, infant and child mortality rates for Delhi are 27.4 deaths per 1000 live births, 45.9 deaths per 1000 live births and 58.4 deaths per 1000 live births. Anemia is high among the urban poor women

(42.7percent). The anemia situation has worsened over time for women and nearly half of urban poor children of Delhi are malnourished.

NFHS-3 report found the levels of malnutrition among children continue to be very high even in urban areas. The larger proportion of stunted children is found in Mumbai (45 percent) Meerut (44 percent) and Delhi (41 percent). In general, on all three indices of nutrition (stunting, wasting and underweight), slum children have low nutritional status than non-slum children in these cities. Malnutrition is widespread even among adults in India. The proportion of women in Delhi 14 percent. Prevalence of overweight or obesity among women is highest in Punjab (30%), followed by Kerala (28%) and Delhi (26%) (The low fertility states). Anaemia to be more widespread among poor than non-poor women and men, but the differentials is not very large. The prevalence of asthma among women varies from 591 per 100,000 in Delhi. In Delhi and Kolkata, prevalence of asthma among both women and men is higher in non-slum areas than in slum areas. The percentage of ever-married women age 15-49 the experience of spousal physical or sexual violence among ever-married woman varies from 15 percent in Delhi. There are 53% urban poor households in India which do not have a toilet and 34% urban poor children in Delhi do not have toilet in house. There are 81.5% urban poor households in India and 70% urban poor children in Delhi do not have piped water supply in house. Only 25% urban poor children in Delhi are fully immunized and 46 % urban poor children under 5 years of age in Delhi are underweight. There are 58 % urban poor children under 5 in Delhi are stunted reflects high levels of Food Insecurity – 50% hunger in a study in Delhi slums. Only 36% urban poor children in Delhi have access to Aganwadi center. There are 50% boys and 54% girl children among urban poor in Delhi who attended school (Gupta et al, 2009).

Almost 90% of urban poor are involved in urban informal sector (USAID, 2002).

Less than half of urban poor (42.5%) have BPL cards (NSSO, 2004-05).

Rationale of the study

Slum population lives in poor socio economic condition with lack of infrastructure, education and health facilities; and basic requirements for health like safe drinking water, hygiene and sanitation. Therefore they have risk to high mortality and morbidity. Hence there is need to study this vulnerable population.

As regard study area historically this place was inhabited by workers engaged in quarrying and stone cutting. These activities are known to have adverse effect on health. There has been occupational diversification and growth of population in this slum since 1960. Its location in the southern part of the city which has many facilities at all levels. This calls for a study to examine the access to the health services in this area.

In the light of accelerated urbanization, migration in to cities becomes inevitable. The pull factors attract populations from depressed areas. They locate themselves in the slums and live in poor conditions. Basic infrastructure is often appalling. Poor buying capacities due to lowly paid work affects the food basket also. All of this impacts on the health of the people living in the slums.

Therefore the present research poses the following research questions.

Research Question

- What are the patterns of morbidity? What are the factors which (a) enable (b) hinder access to health care services among urban poor?
- What is the pattern of health seeking behavior and health care expenditure?
- What can be the alternatives for improving their condition of living as well as health?

Hypothesis

Living conditions in slums are conducive to poor health: and access to health care services is determined by socio-economic background and availability of health facilities and services: infrastructure. Government scheme and programmes often are useful in improving access to health care.

Therefore the purpose of the present research is to examine morbidity condition and pattern of access to health care living in slum; with special reference to women and children.

Specific Objectives' are as follows

- Examine the basic infrastructures and housing in the study area.

- Understand reported Morbidity among the members of the household in the last one year.
- Study the patterns of health care seeking behavior in terms of facilities and providers in public and private sectors.
- Examine utilization of state sponsored welfare schemes.
- Study the household expenditure on health.

Research design

The research design describes in research method, the research instrument, the data source and the analytical framework of a study. The different components of the research design are described below.

a. Sampling and sample size

This study has been conducted in a slum of south Delhi located in Vasant Vihar and called Kusumpur Pahari. The slum was divided in five Blocks synonymous with the population residing in Kusumpur Pahari.

Kusumpur Pahari is divided into 5 Blocks A, B, C, D and E. From each block, a given number of households were selected proportionately to the predominant population. During a previous field work visit to Kusumpur Pahari, approximate proportion of households from different regions was found out from residents of the area. It was reported that there were approximately 40 percent households who were from UP, 30 percent from Rajasthan, 20 percent from Bihar, 6 percent from Haryana, and 4 percent from Tamil Nadu. Based on this figure the number of households from each block was selected. Total sample size was 200, so 40 percent of 200 were 80 households. Hence 80 households were interviewed from Block A which has predominantly households from UP. Similarly 30 percent of 200 are 60. Therefore 60 households were interviewed from Block B which has predominantly households from Rajasthan. The total population size of the blocks decreased from A to E. From each Block householders were selected using convenient sampling (Table-1.1).

Table-1.1: No of households selected per block

Block	Population predominantly from	No of households
A	Utter Pradesh	80
B	Rajasthan	60
C	Bihar	40
D	Haryana	12
E	Tamil Nadu	8

The sample size is 200 household selected from different blocks in Kusumpur Pahari proportionate to population from different states. Thus, UP households (80), Rajasthan (60), Bihar (40), Haryana (12), and Tamil Nadu (8). Data was collected from the available responsible members of the Household. The unit of study is individuals and households. Some analysis has been done at individual level and some of household level (Table-1.1).

Table-1.2: Unit of analysis used for issues

Issues	Unit of analysis
Age, Religion, Caste, marital status, age at marriage, Occupation, substance use and frequency, type of liquor, reported illness(major and minor), duration of illness, source of treatment, source of treatment providers, whether hospitalized, cost of treatment, source of money for treatment.	Individuals
Type of floor and roof, No of rooms, Ventilation ,house ownership, Type of cooking space, Bathing space, consumer goods items, source of water supply, electricity available, drainage facility,	Households
Sex, Education, income per month, native status,	Households and individuals

b. Source of data

The study has used both primary and secondary data sources. Primary data was collected from household members, providers and key informants in Kusumpur Pahari. Secondary data was collected from different reports, census and surveys like NFHS, NSS and DLHS as well as micro studies in public domain.

c. Research Methods and Instruments

Different methods used in the study were individual interview and Observation .The research instruments that were used for the purpose of data collection were semi structured interview schedule, check list and field notes.(Table 1.3)

Table 1.3: Research method and instruments

Research method	Research instruments	No
Individuals interview	Individuals questionnaire schedule	200
Key informants interview	Key informants interview schedule	28
Case study	Narrative Analysis	10
Observation	Fields notes	
Discussion	Check list	

Field Work Duration

The field work was done in Kusumpur Pahari between December 2011 to February 2012. The research was familiar with Kusumpur Pahari due to the visit done earlier as part of the course work CSM 642- Urbanization and Public Health in India. On the first day of interview, I went to Block A. There were a group of men sitting. I introduced myself, and told them I was a student from JNU and was doing research on Kusumpur Pahari. Some people were co-operative and gave interviews easily. Some did not trust and said that I was government staff and had come to take information before election. This probably had a positive effect. After that the news of the survey spread to other blocks and I was able to take the interviews.

I had some difficulty in finding the Blocks; especially it was very difficult to find the Block where the people from Bihar lived. In some houses people were not at home when I went to interview. I had to return to those houses. Some persons refused to give the interview. However, the non – response rate and incomplete interview was very low.

It was challenging to do data collection in a place like Kusumpur Pahari as some parts completely lacked sanitation.

It was very difficult to find the providers for the interview. The Anganwadi workers did not come to the Anganwadi centre regularly. Most of the Dais were domestic workers and were not there during the day. The quacks did not want to give interview

as they were worried of being 'put in trouble'. Even after showing the letter from JNU some did not give interview. One of them went inside his 'shop' also took the signboard inside, removing all signs of his profession. This was also perhaps due to the fear that they did not have appropriate degree to provide healthcare.

The respondents did not report their income and luxury items correctly. They were under the impression that if they did, they will not get their BPL cards. One woman in the community spread the message that people should not report their correct assets; so many people did not report it correctly.

Data Analysis and Analytical framework-

SPSS was used to analyze the quantitative data. Frequency tables, cross tabulation and correlation have been used for analysis.

The study findings were organized in the following analytical framework

- Basic infrastructure and housing
- Morbidity pattern
- Available of health care services
- Access to health care services and facilities
- Health seeking behavior
- Pattern of utilization of health care facilities
- State sponsored welfare schemes addressing health.

Conceptualization of the Research problem

India's population in 1901 was about 238.4 million, which has increased by more than four times in 110 years to reach a population of 1,210 million in 2011. The population of India as per the latest census is 1,210,193,422 of which the urban population is 377, 105, 760. [31%] (Census of India, 2011). This as compared to the 2001 census shows an increase in urban population of 28% (Census 2001). The proportion of urban population in India has increased consistently over the years- from 11% in 1901 to 26% in 1991 in 28% in 2001 to 31% in 2011. Urban population is estimated to

increase to 432 million in 2021 and upto 550 million by the year 2030 (Census of India 2001, Gupta et al, 2009).

Delhi is the capital of India. Current Population of Delhi in 2011 was 16753235 [Census 2011]. In 2001 total slum population in India was 42,578,150 while Delhi had slum population of 2,029,755 [Census of India, 2001].

Increase in urban population has been both due to natural causes and due to migration. Migration is caused due to various push and pull factors. Very often poor families migrate in search of work and settle in squatters. Slowly these gives rise to slums.

Health status is poorer in slum than non-slum area. NFHS shows that the infant and child mortality, immunization, maternal care, nutritional status and anemia among children and adults are poorer for slum dwellers compared to non slum areas. The National Family Health Survey (2007) has found that More than 35.3% children under the age of five years in Delhi slums suffer from malnutrition. One study found that twenty two percent of mothers in Ahmadabad slums reported that their children had Acute Respiratory Infection symptoms in the preceding two weeks, and 37% of children had diarrhea during the same period. Prevalence of communicable diseases was also very high among urban poor in slum areas. Poor have to bear large share of Out of Pocket Expenditure on health (Fry et. al. 2002).

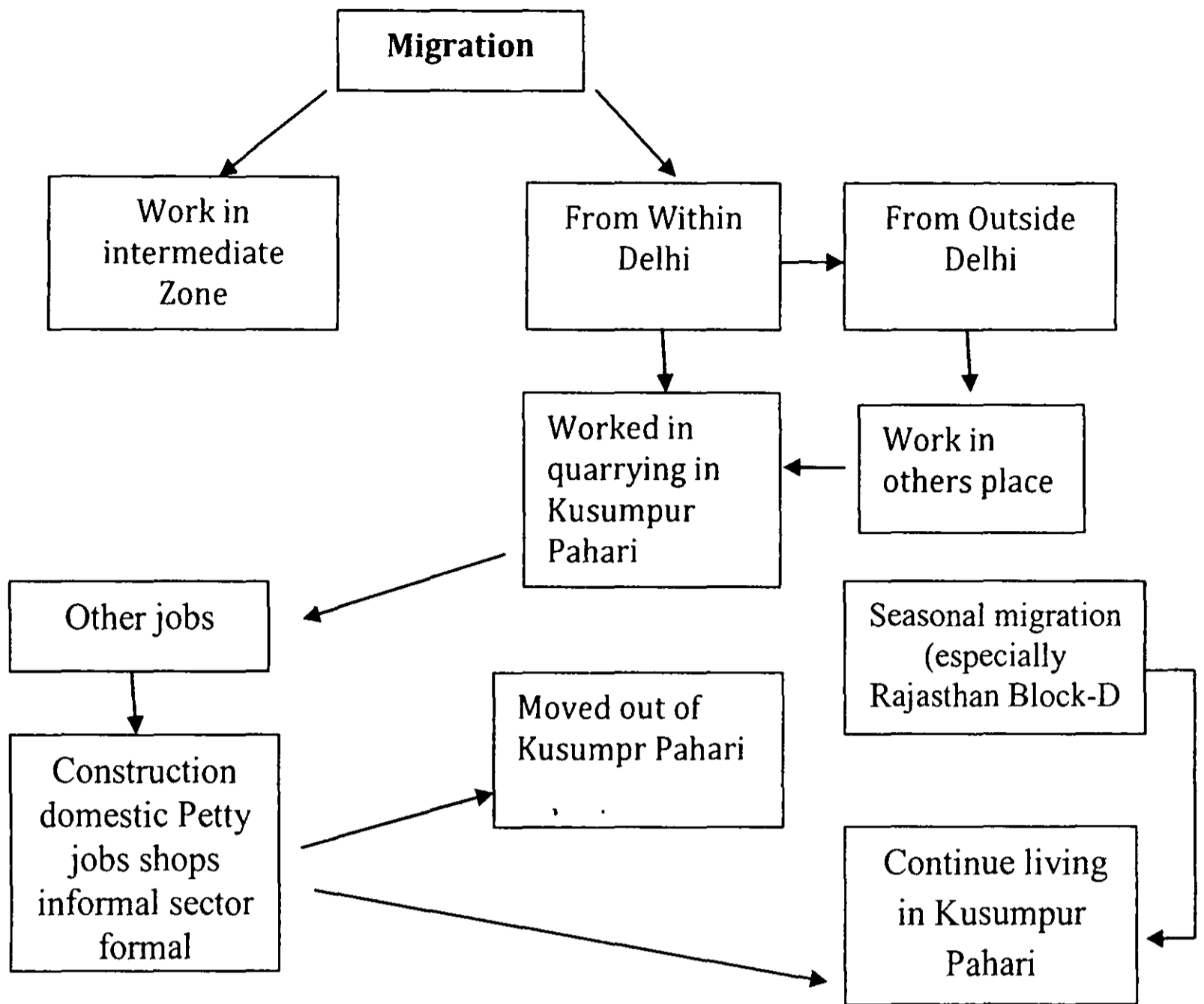
Another study in Kolkata also shows the poor health conditions of persons living in slums. There are environmental and economic conditions which are associated with malnutrition among children. Infant and maternal mortality rates were very high in the slums. Diseases like hepatitis, encephalitis and typhoid existed due to poor hygienic conditions. The incidence of respiratory diseases fever, viral infection, tuberculosis, diseases of the skin, kidney and urinary tract were high in the slums. The most conspicuous and highest incidence could be noticed for tuberculosis which was ten times higher in the slums than in the city as a whole. Viral infections were 2.5 times higher, skin diseases 2 times, respiratory diseases 1.4 times, heart and circulatory system about 10 times and allergic diseases 1.9 times higher than the rest of the city (Kundu, 2003). In Mumbai slums women reported higher morbidity than men. Problem related to menstruation, child bearing, aches, pains, injuries and weakness accounted for 51% of morbidity. For women this was often related to their work. In another study it was found that pneumonia and bronchitis were common among infant

in households using wood or kerosene as fuel in Kusumpur Pahari (Sharma et al, 1995).

Due to poor health, health care costs also have to be borne by the poor living in slums. Alam et al, (2009) found that out of pocket health expenditure as percentage of total consumption expenditure is higher for slum population than non-slum population. Slum population spent 13.8% and non Slum population spent 9% on health (Alam et al., 2009). A large number of households fall under BPL due to health expenditure. The analysis of NSSO's latest (60th round) national morbidity, healthcare survey data suggests that around 6.2% of total households (6.6% in rural areas and 5% in urban areas) fell below poverty line as a result of total healthcare expenditure in 2004. Around 1.3% of total households (1.3% in rural areas and 1.2% in urban areas) fell below poverty line as a result of expenditure on inpatient care, while 4.9% of households (5.3% in rural areas and 3.8% in urban areas) fell BPL as a result of outpatient care (Berman et al, 2010). Studies also show that health expenditure on common ailments is high and hospitalization expenditure is low, for urban poor. Therefore there is need to understand morbidity and burden of expenditure for urban poor. If we want to understand health condition of urban poor then we first need understanding of social determinants of health, then we can understand reasons for health condition better. Social determinants can be of two types -one is structural and second is intermediate determinants. The structural factors comprise of poverty, gender, ethnicity, education, and health, whereas the intermediate factors include living and working conditions, social and political exclusion, social capital, access to quality health care, violence and crime, transportation, and the physical environment.

The Kusumpur Pahari slum was formed due to migration by migrant workers. The settlement started with migrant workers from other states who came to work in quarrying activities. Initially only the male migrants came, later their families also migrated to Kusumpur Pahari. Gradually other male relatives migrated due to social networks. Most migrant women contribute to household earning by working as domestic help and construction workers. Those who worked as construction worker were mostly from Rajasthan and those who worked as domestic help were mostly from Tamil Nadu.

The migration flow into the slum can be represented diagrammatically as follows-



This study will try to understand the morbidity pattern of residents of Kusumpur Pahari. It will study the different factors which affect morbidity of persons living in slums, their access to health care and health care expenses that they have to bear.

Chapter 2

Review of literature

CHAPTER II

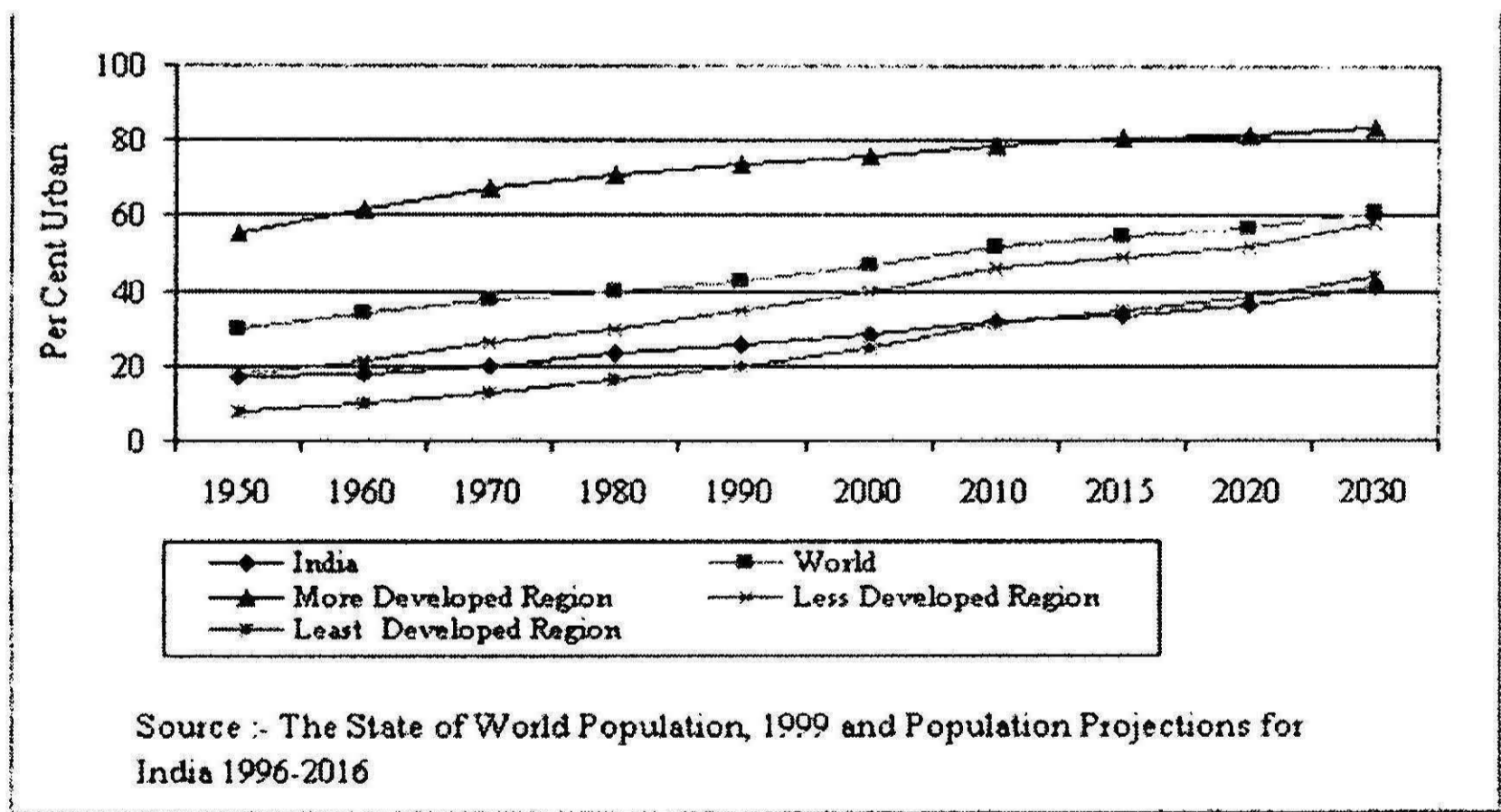
REVIEW OF LITERATURE

The present chapter reviews the literature relevant to the present study. Issues of urbanization globally, in India and Delhi, urban poverty, slums, health care services; facilities and providers; and expenditure on health have been reviewed. Housing and basic infrastructure have also been reviewed.

II.1 Trends in Urbanization

The world level urbanization trends between 1950 and 2030. At the world level almost 50 percent of population is urban but in comparison India's 30 percent of population is urban. The more developed region has very high, 80 percent urban population. It is expected that urban population in India will become nearly 41% (611 million) by 2030 and 49 % (763 million) by 2040 (Agarwal, 2010) (Figure-2.1).

Figure-2.1: World Urbanization Trends, 1950-2030

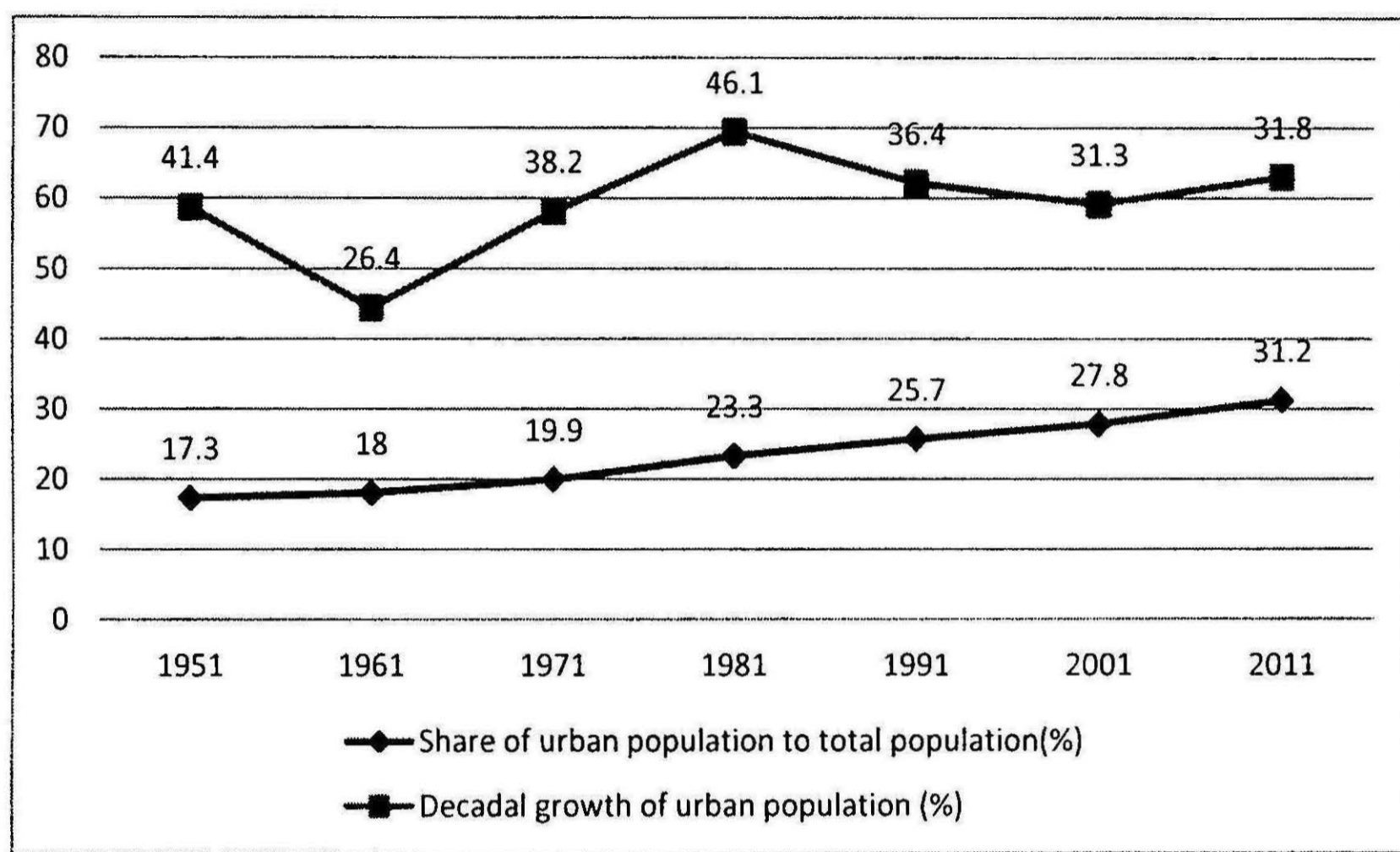


Source: Ramchandaran, et al, 2000, pp7.

India's population in 1901 was about 238.4 million, which has increased by more than four times in 110 years to reach a population of 1,210 million in 2011. The population of India as per the latest census is 1,210,193,422 of which the urban population is 377, 105, 760. [31%] (Census of India, 2011) this as compared to the 2001 census shows an increase in urban population of 28% (Census 2001). The proportion of

urban population in India is increasing consistently over the years- from 11% in 1901 to 26% in 1991 in 28% in 2001 to 31% in 2011. Urban population is estimated to increase to 432 million in 2021 and upto 550 million by the year 2030 (Census of India 2001, NFHS 2005-06).

Figure-2.2: Growth in Urban population in india-1951-2011



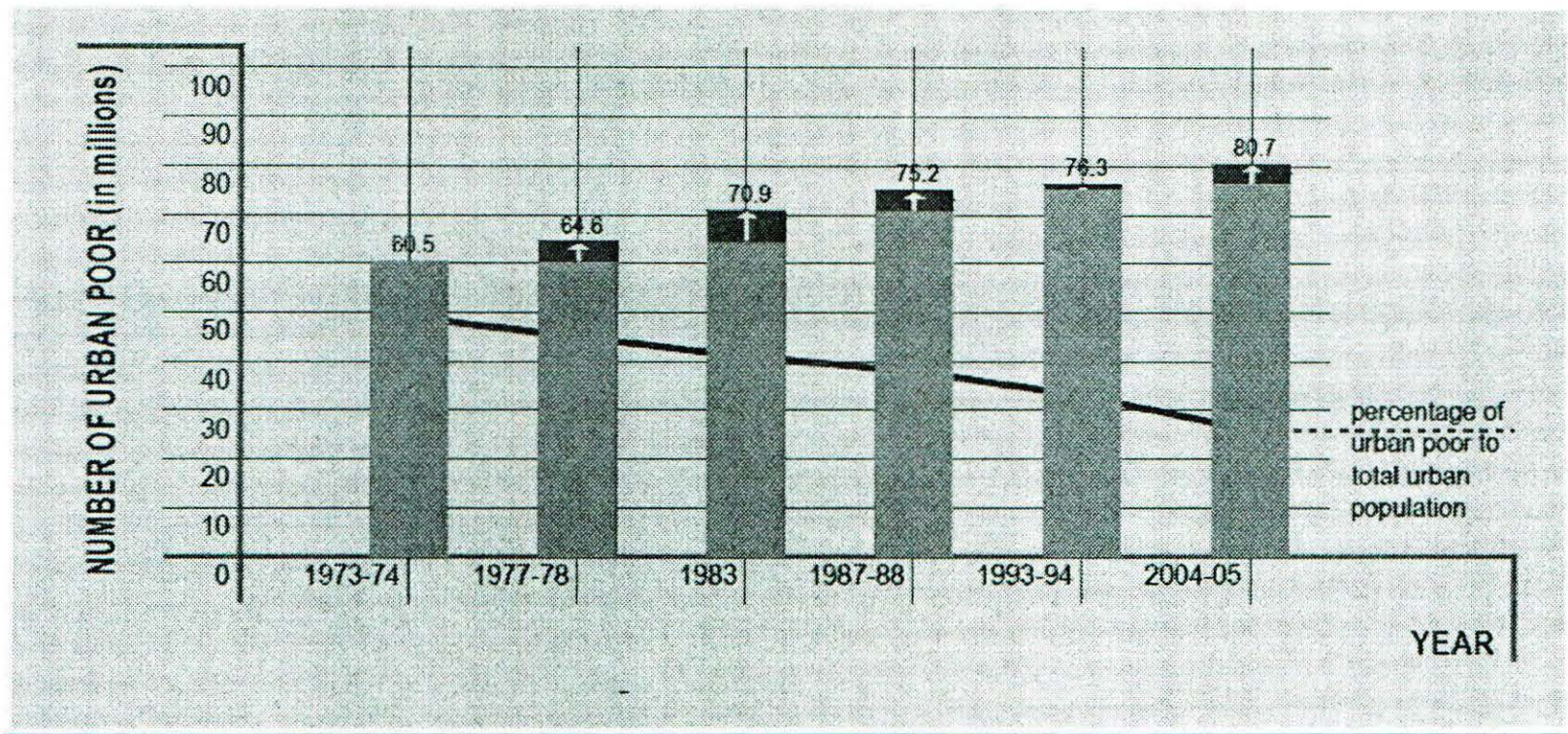
Source: Census of India from 1951-2011; 2011 data from the provisional tables. Cited in Report of the working group on urban poverty, slum and service delivery system, 2011.pp 2.

In India the share of urban population as total population is small but it has been increasing. From only 17.3 percent in 1951, share of urban population has grown to 31.2 percent in 2011.

Decadal growth of urban population has come down. In 1951 it was 41.4 percent but in 2011 it was 31.8 percent (Figure-2.2).

According to the NSSO (55th Round) 30-day Recall period, 23.62 percent of India's urban population is living below the poverty line. The urban poor population is 3.47 percent less than the rural poor. The number of urban poor living below the poverty line is 670.07 lakhs.

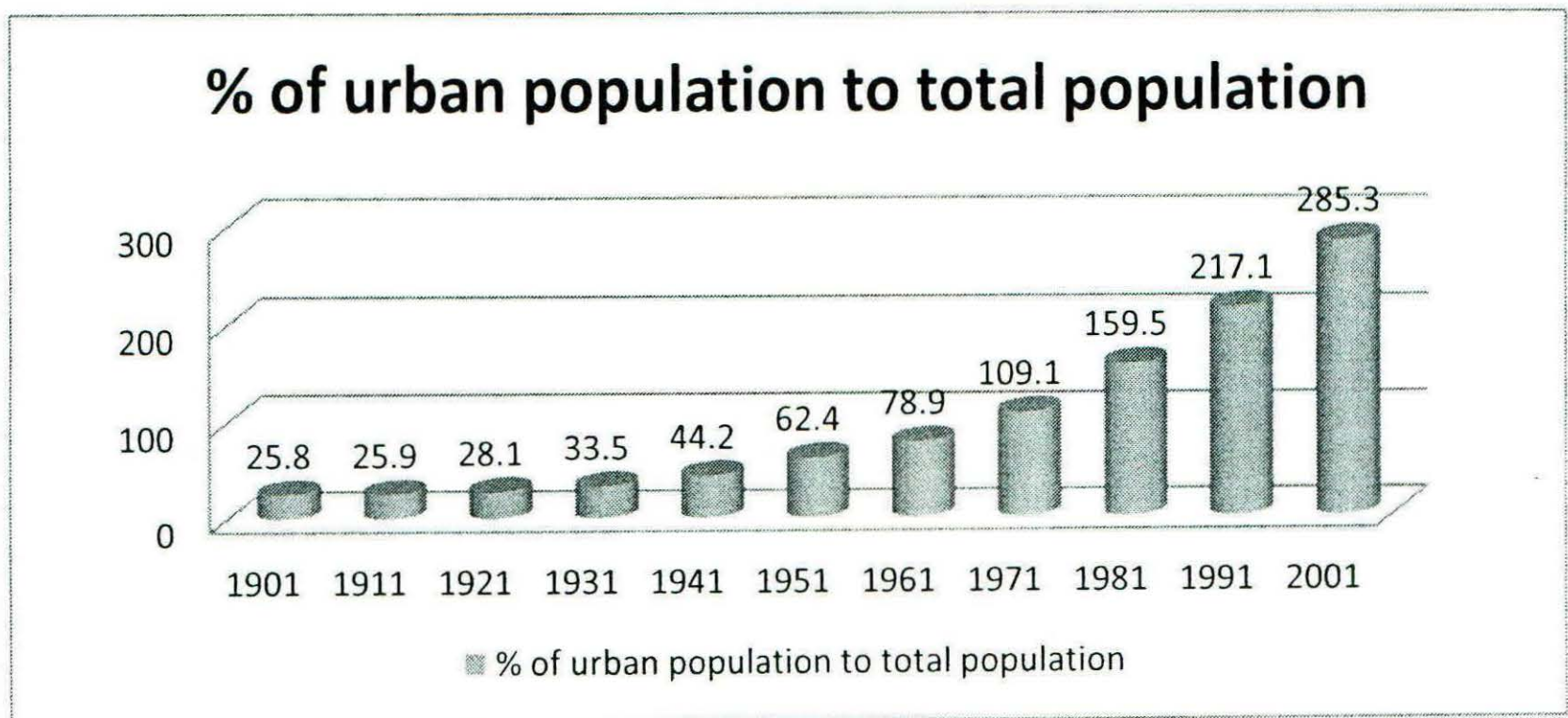
Figure-2.3: Trends in urban poverty 1973-2005



Source- GoI, M/o HUPA 2009e:17, cited in Report of the working group on urban poverty, slum and service delivery system, Planning Commission, 2011, pp 3.

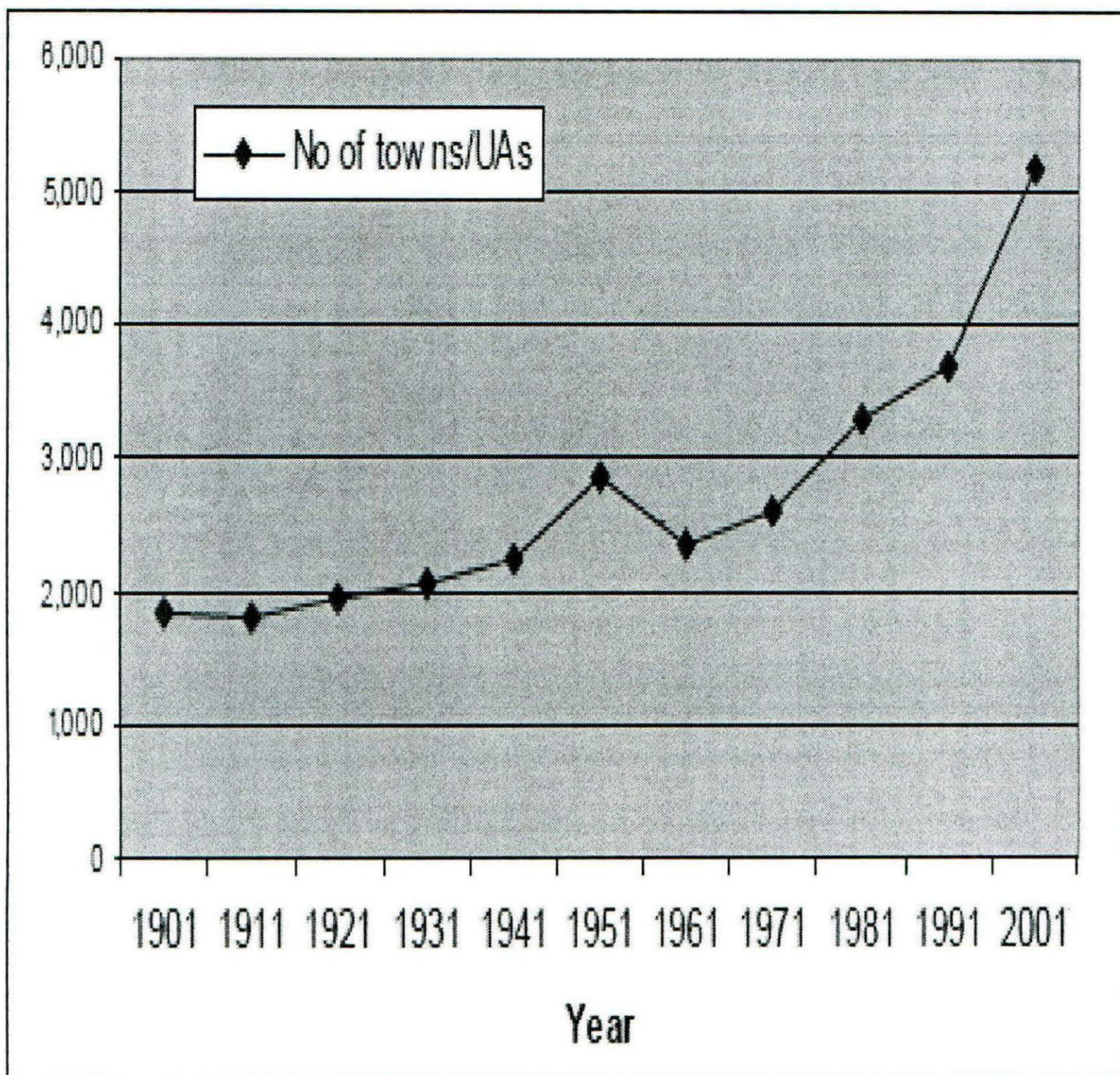
Out of 309.5 million person who lived in urban areas in 2004-05, 80.8 million people were below poverty line and their per month consumption was less than Rs. 538.6. The numbers of the urban poor have risen by 34.4 per cent between 1973- 2004 and the share of the urban poor in the total has increased from 18.7 per cent in 1973 to 26.8 per cent in 2004-05. But the percentage of the urban population living below the poverty line has decreased. From about 50 percent in 1973-74, the proportion declined to about one-fifth of the urban population in 2004-05 (GOI, 2011) (Figure-2.3).

Figuer-2.4: Growth in urban population (1901-2001)



Source- Chugh,, Data Needs for Achieving UEE in Urban Areas: Focus on Disadvantaged Groups, accessed from, pp 10.

Figuer-2.5: Increase in urban Agglomeration (1901-2001)



Source- Chugh, Data Needs for Achieving UEE in Urban Areas: Focus on Disadvantaged Groups, accessed from, pp 10.

Urban population increase is more than ten times between 1901 to 2001. According to census in 2001 urban population was 285.3 million while in 1901 it was 25.8million.

There has been sharp increase in urban agglomeration since independence especially after 1961. The sharpest rise has been from 1991 to 2001 (Figure- 2.4 and 2.5).

Table-2.1: Cities and towns reporting slum -India, state, union territories-2001

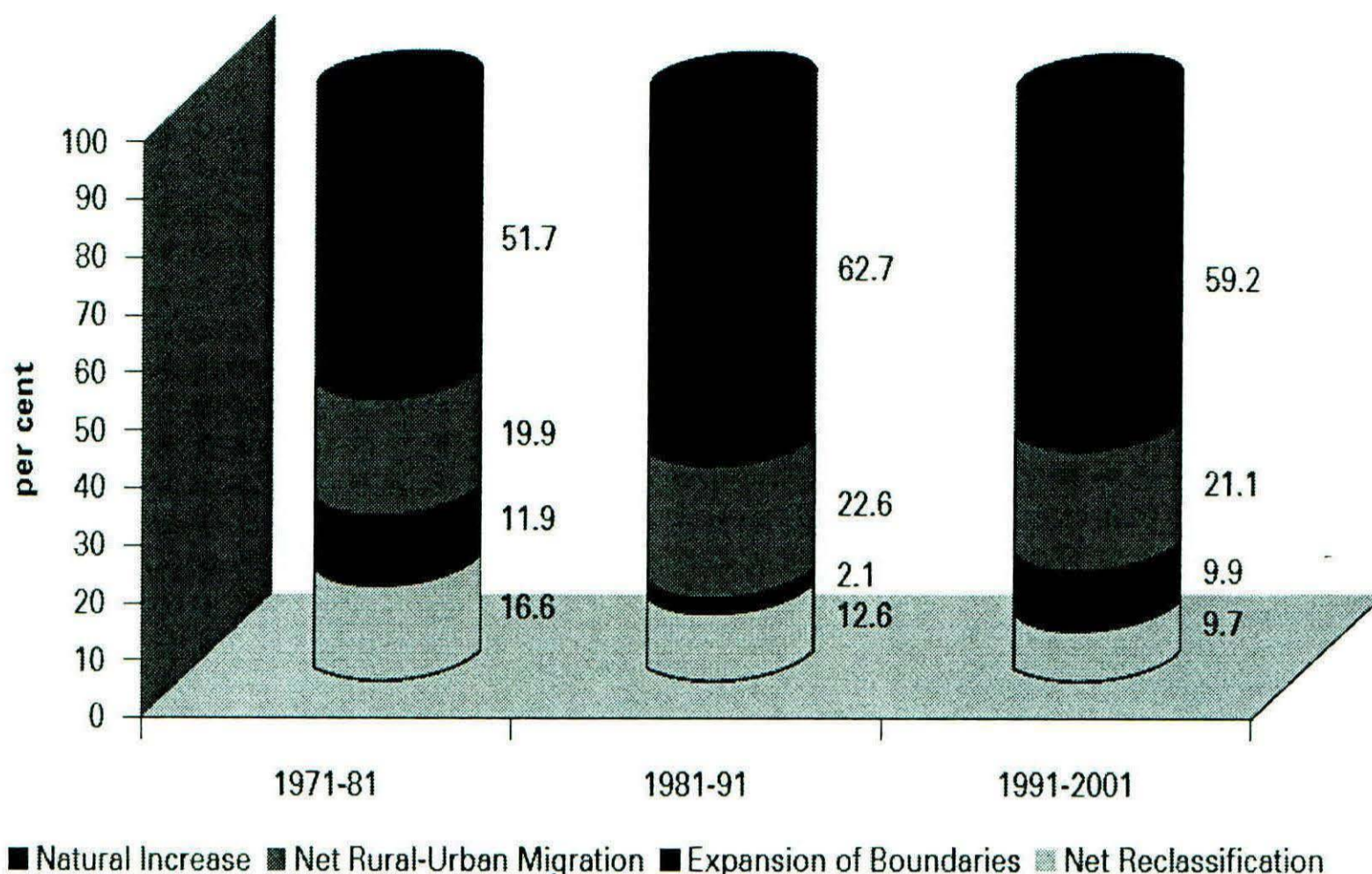
State union territory	Number of cities town reporting slum	Percentage of slum population to total	
		Urban population of state	Population of cities/towns reporting slum
India	640	15.0	23.1
Jammu & Kashmir	5	10.7	18.6
Punjab	27	14.0	20.5
Chandigarh	1	13.2	13.2
Uttaranchal	6	9.0	19.3
Haryana	22	23.2	33.1
Delhi*	16	15.7	18.0
Rajasthan	26	9.8	16.6
Utter Pradesh	69	12.7	20.7
Bihar	23	6.1	11.0
Tripura	1	5.5	15.8
Meghalaya	1	19.0	65.0
Assam	7	2.4	6.0
West Bengal	59	18.4	27.1
Jharkhand	11	5.0	12.4
Orissa	15	11.4	22.2
Chhattisgarh	12	19.5	31.4
Madhya Pradesh	43	15.1	25.2
Gujarat	41	9.9	14.7
Maharashtra	61	27.3	33.3
Andhra Pradesh	77	24.9	32.2
Karnataka	35	7.8	12.7
Goa	2	2.2	8.3
Kerala	13	0.8	2.0
Tamil Nadu	63	10.4	20.0
Pondicherry*	3	11.3	14.3
A & N Islands*	1	14.0	16.2

Note-Himachal Pradesh, Sikkim, Andhra Pradesh, Nagaland, Manipur, Mizoram, Daman & Diu & Nager Haveli and Lakshadweep have not reported any slum in2001.

Source-Census on India, 1991-2001, General population table part II- A (i), Office of the Registrar General & Censes Commissioner, GOI, New Delhi. Cit in National Urban Health Mission-Framework for Implementation, (Draft), MOHFW, GOI, 2010.

As regards the percentage of slum population to total urban population of state Maharashtra has the highest percentage (27. 3 percent), followed by Andhra Pradesh (24.9 percent) and Haryana (23.2 percent). Delhi has the sixth highest proportion of slums with 15.7 percent of the urban population being slum population (Table-2.1).

Figure-2.6: Factors of Increase in Urban Population

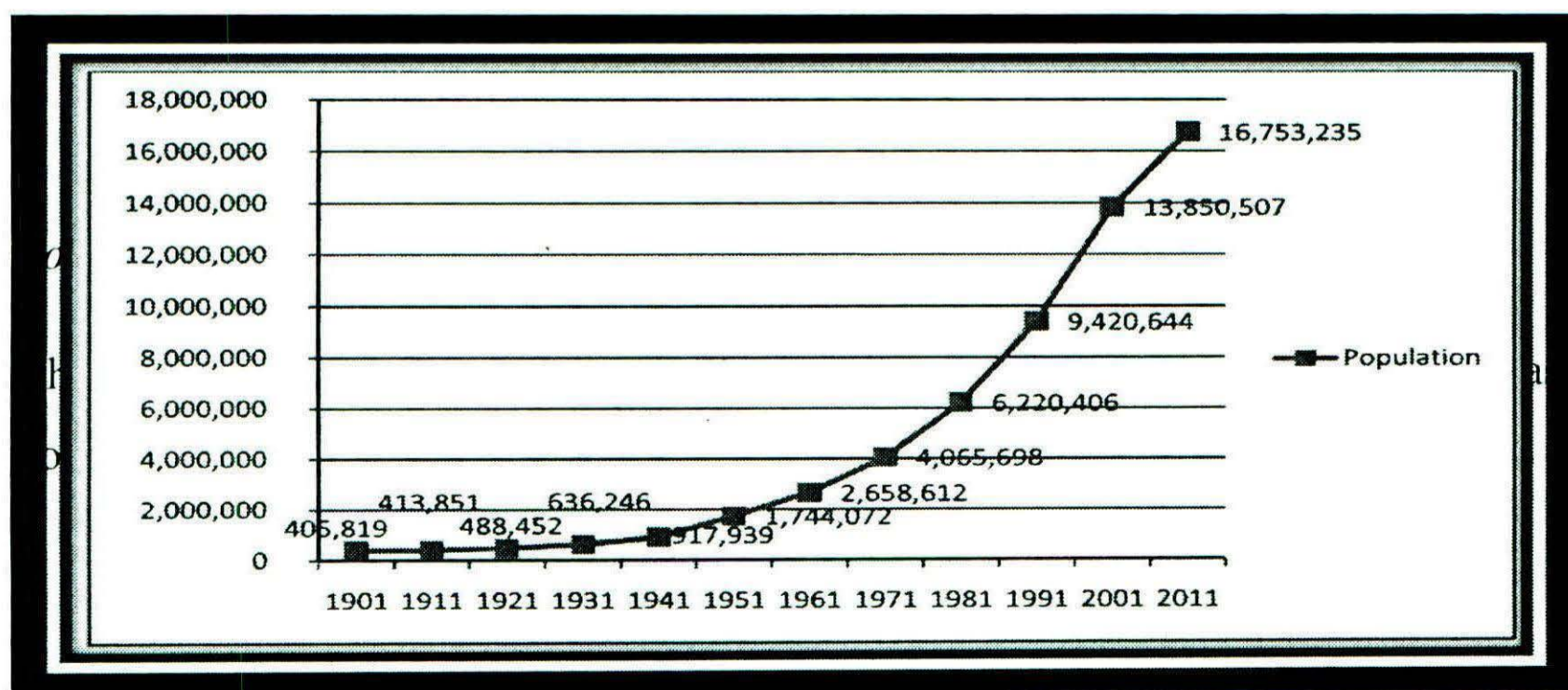


Source: Census of India.

Source:- Powered Expert Committee (HPEC) for Estimating the Investment Requirements for Urban Infrastructure Services, Ministry of Urban Development, GOI, pp11.

The most important factor contributing to the increase in urban population is natural increase. The next most important reason is net urban rural migration. Almost 20 percent increase is due to net urban rural migration (HPEC, 2011) (Figure- 2.6).

Figure-2.7: Growth of population of Delhi over time from, 1901 to 2011



Source-census of India 2011 (provisional data)

The increase in total population of Delhi can be traced back to 1901 which has continued till 2011 (Figure- 2.7).

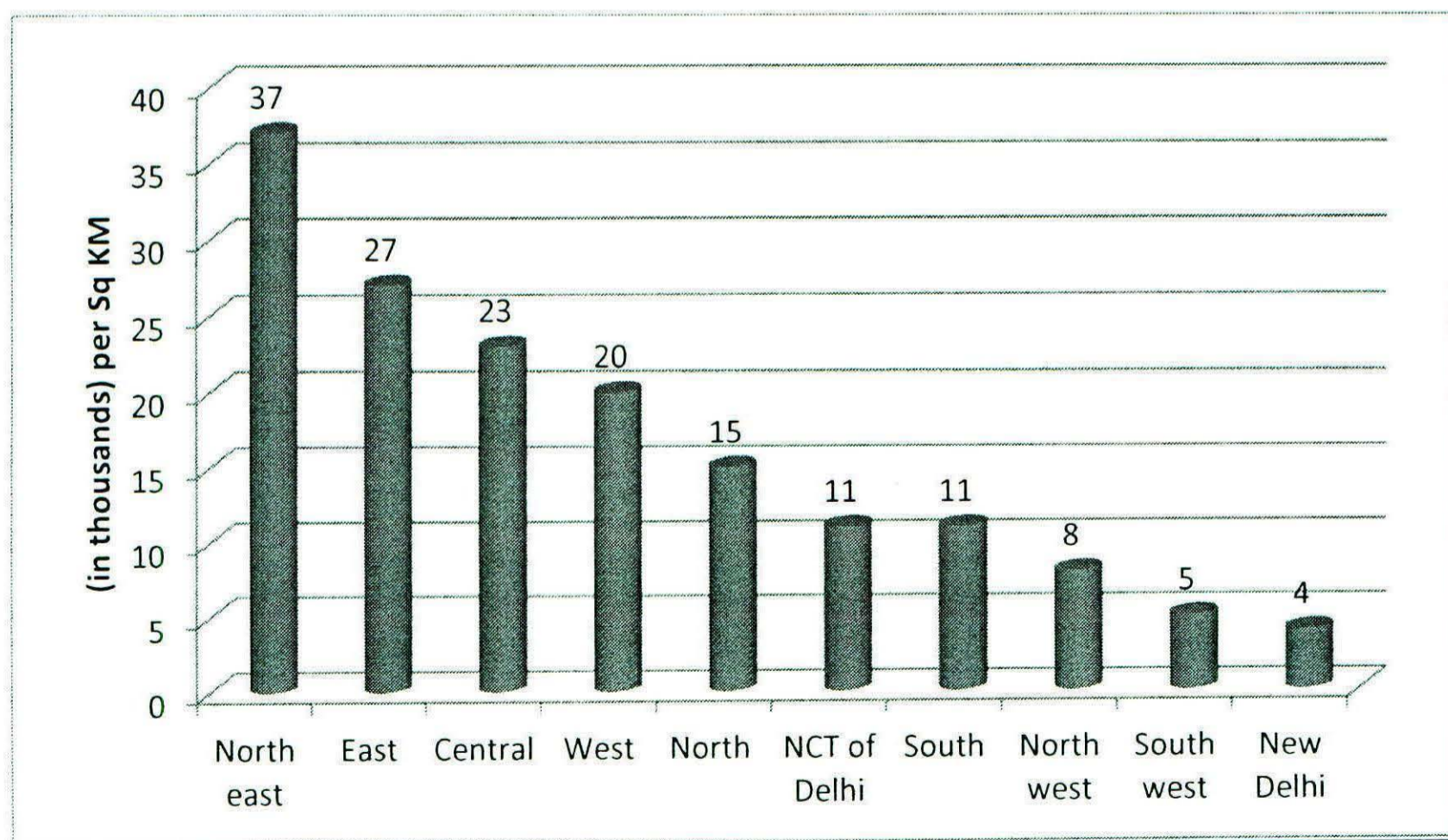
Table-2.2: Growth of Delhi's population, 1951-2001

Years	Total population	Total urban population	Urban pop'n as % of total Pop'n	Decennial Urban growth	Annual urban growth rate %
1951	1,744,072	1,437,134	82.40		
1961	2,658,612	2,359,408	88.75	64.17	5.08
1971	4,064,698	3,647,023	89.70	54.57	4.45
1981	6,220,406	5,768,200	92.73	58.16	4.69
1991	9,420,644	8,471,625	83.93	46.87	3.92
2001	13,782,976	12,819,761	93.01	51.33	4.23

(Source: Census of India 2001: 15) cited in Ahmad and Choi 2011, pp 77.

Urban population as percentage of total population in 1951 is 82.40% and in 2001 urban population increases to 93.01%. Decennial urban growth rate was 64.17% in 1961 and in 2001 has decreased to 51.33% but still it is very high. Annual urban growth Rate has been 4 to 5 % between 1961 and 2001. As can be seen in the above figures, there has been a large increase in the population of Delhi (Table- 2.2).

Figure-2.8: NCT of Delhi- District wise density of population (in thousands per Sq KM)



Source- census of India 2011(Provisional Data)

The Figure 2.8 above depicts density of population in different districts of National Capital Territory of Delhi; North East district has the highest density of 37,000 persons per square kilometer.

II.2 Slums: Problems and Issues

Urbanization in developing countries has led to proliferation of slums. High rate of urban growth often cannot match the need for housing, educational, health services and social facilities including drinking water and sanitation.

II 2.1 Defining slums

The definition of slums is different in different countries. According to United Nations, in 2002, The UN in 2002 gave an operational definition of slums in a report. It was defined as communities characterized by insecure residential status, poor structural quality of housing, overcrowding, and inadequate access to safe water, sanitation, and other infrastructure (United Nations Human Settlements Program, 2003 cit in Gupta et al, 2009).

Estimation of population in slum and non slum area done by census. It used the following criteria:-

(i) All specified areas in a town or city notified as

‘Slum’ by State/Local Government and UT Administration under any Act including a "Slum Act"; (ii) all areas recognized as ‘Slum’ by State/Local Government and UT Administration, Housing and Slum Boards, which may have not been formally notified as slum under any act; and, (iii) a compact area of at least 300 population or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities" (NFHS3-2005-06). The legal definition of slums in India, however, differs from state to state (Chandramouli, 2003 cited in Gupta et al, 2009).

Slums are multidimensional. And they are characterized by the following:

- Lack of basic services
- Substandard housing or illegal and inadequate building structures
- Overcrowding and high density

- Unhealthful living conditions and hazardous locations
- Insecure tenure
- Irregular or informal settlements
- Poverty and social exclusion
- Minimum settlement size (Shaaban A. Sheuya, 2008)

II 2.2 Factors behind Growth of slum

Market and trade can have very large effects on migration. The root causes of trade related push and pull factors originates in the area of migration which takes place at local, regional, national and global levels .For example, in 1976–77 there has been a massive production of cocoa leading to surplus and subsequent fall in price, henceforth the high cost of labour , low price created a condition of unemployment in Brazilian cocoa firms led to migration of an unemployed population to Atlantic forest in search of newer opportunities (Cullen et al , 2005).

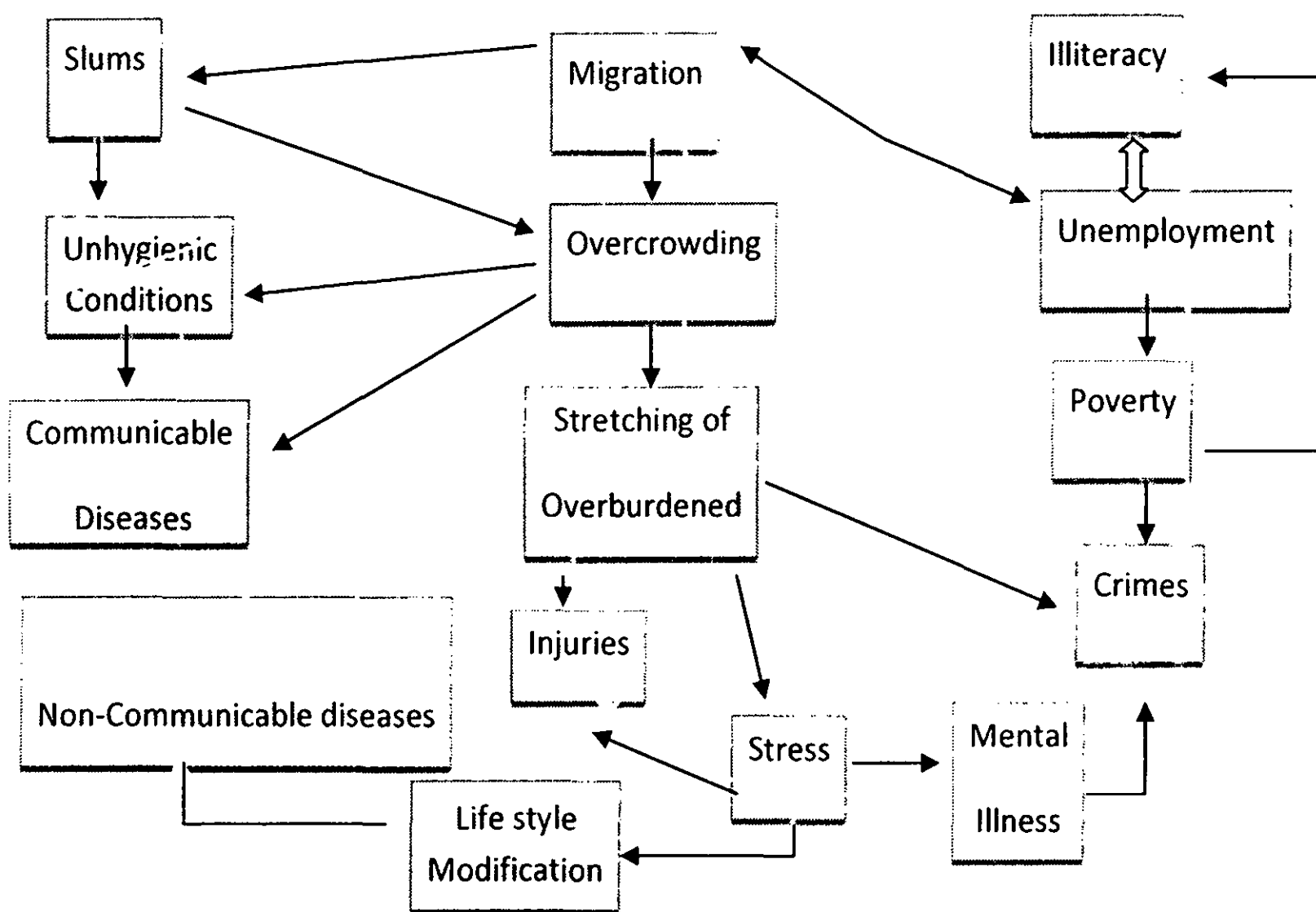
The route of migration can be found in multiple factors which are increased family size, limited agricultural property, destruction of house and property in man/natural made disasters, search for better income prospects, better educational facilities, better “Life style” basic amenities – health, transport, water and electricity. Migration is complex process and has been a feature of human societies for many centuries, since the mid-twentieth century; however, the nature of migration has also become largely influenced by globalization (United Nation, 2006). The process of migration has its push and pulls factors at the place of origin and destination.

Major push factors in areas of origin that can result in migration are environmental damage including the scarcity of or inadequate access to land and resources, lack of employment opportunities, poverty, high population pressure, environmental degradation, including loss of soil productivity, natural disasters, civil unrest and conflict, rites of passage when young people leave home to make their way in the world.

While push factors force people to leave their native place, pull factors are those which decide where a person migrates. Some of these Pull factors are employment opportunities, access to markets, access to facilities and amenities, such as social

services and transport, safety and security, family re-unification and networks. (Oglethorpe et, al, 2007).

Figuer-2.9 Migration-cobweb



Source- <http://www.pitt.edu/~super4/41011-42001/41261.ppt> access on 12 September 2011.

Migration process evolves a cobweb which links living conditions, livelihoods, diseases, crime and injuries; crowding life style and related stresses. On the one hand unhygienic condition can cause diseases, overcrowding in living units can aggravate it. Such condition can lead to stress and even indulging in crime. There is ample illiteracy and unemployment among migrants living in slums. There is poverty to which feeds back into overcrowding; poor living condition (figure 2.9).

On arrival, the migrant spends few nights on the railway platform, bus terminal, or even on the streets. Gets acquainted with the city or find someone from the community and move into slum area or squatter. The people also tend to live within the walking distance of work prospective work. The work is generally low paid such as domestic servants, street cleaner, washer man, cobblers, coolies, rickshaw pullers, construction workers. Initially, rural to urban migration is limited to males and usually rural migrant is deprived of his membership of the kin group he belongs to in the

village, suffers from loneliness and faces problems of residential accommodation. So, slum gives him shelter and anonymity in urban area which often leads to alcoholism and prostitution. A migrant getting cash wages is expected to save and support his family in the village. He therefore has to compromise on living conditions and this in turn affects his health adversely (Das, 2007).

Most slum dwellers experience constant deprivation, particularly children. Poor environmental conditions like deteriorated houses, overcrowded, open sewer, uncollected garbage, poor sanitation, flies, water and poor lighting are common situation. People face threat of eviction if they are squatting on someone else's land. Joblessness and alcoholism make men angry or hopelessly drunk and lead to abandoned wives and children. Women work to survive without a male breadwinner or to help him make both ends meet. For some of them, lowly paid jobs are the only options. Due to pressure and unsettlement in life, they tend to develop undiagnosed mental illness. Older children, some no more than 10 year old, take care of their younger siblings while the adults are away. Consequently, children remain undernourished and underweight with their growth stunted from insufficient food; suffer from nutritional deficiencies and air born, water born infections. Diarrhea, gastro – enteritis and respiratory ailments are common illnesses to which many succumb during their first year of life (Goswami and Kedia, 2010).

Due to increase in population at urban areas, there is shortage in houses, and as slum dwellers are poor they are not able to afford the houses government build legally. Other reasons for origin of slums is inability of government to allocate adequate land and housing for poor and when the squatter families are resettled by government at legal plots located at the outskirts areas, sometimes they illegally sell their land and move nearer to their places of employment (Srirangan, 2000). Universal characteristics of slums are overcrowding and congestion, extremely poor sanitation, lack of civic amenities and deviant behavior.

In India more than nine million people live in slums. 12,50,000 are in Bombay, 11,00,000 in Calcutta, 9,00,000 in Madras and 7,00,000 are in Delhi (Arabhi, 2012).

In India some slums are notified slums. These are legal slums and they should get civic services from municipal bodies. The non notified slums do not get any facilities

from municipal body. They mostly have temporary migrant workers or new rural migrants (Gupta et al, 2009).

Slums started spreading in the 1960s along with the industrial developments. The two main reasons for creation of slums are unplanned migration of rural population to metropolitan city and unbalanced economic developments in the country (Das, 2007).

There are two types of slums mostly found in India. The first is *Dilapidated or unmaintained buildings*. This emerges as a result of rent control and tenant protection laws, no benefit to the owners for repairs. Municipal taxes increased but the rent proceeds did not. The second is *Squatters*. These are forcefully encroaching government and private vacant land unfit for human settlements like river banks, drainage canals, marginal railway lands, swamps, road sides, under bridges and even in public parks (Das, 2007). Kushumpur Pahari is an example of such a settlement. It has now been legalized.

II 2.3 Housing in slums- some issues

Most of the houses in slums are temporary structures made out of material such as rags, plastic pieces, rusted pieces of iron, pieces of canvass cloth, and almost total absence of tap water, latrines and roads. Often there is very high density of population per square mile but if people are staying in multi-storied permanent structures, they share inadequate civic and sanitary facilities; these are not identified as slums. Slums culture is marked by apathy, insecurity, social isolation and disease.

It is not necessary that all urban poor live in slums or all those people living in slum are urban poor. According to NFHS3 urban poor has been taken as house in bottom wealth quintile. In this report the bottom 25 percent of the population in urban areas of India were designated as the urban poor.

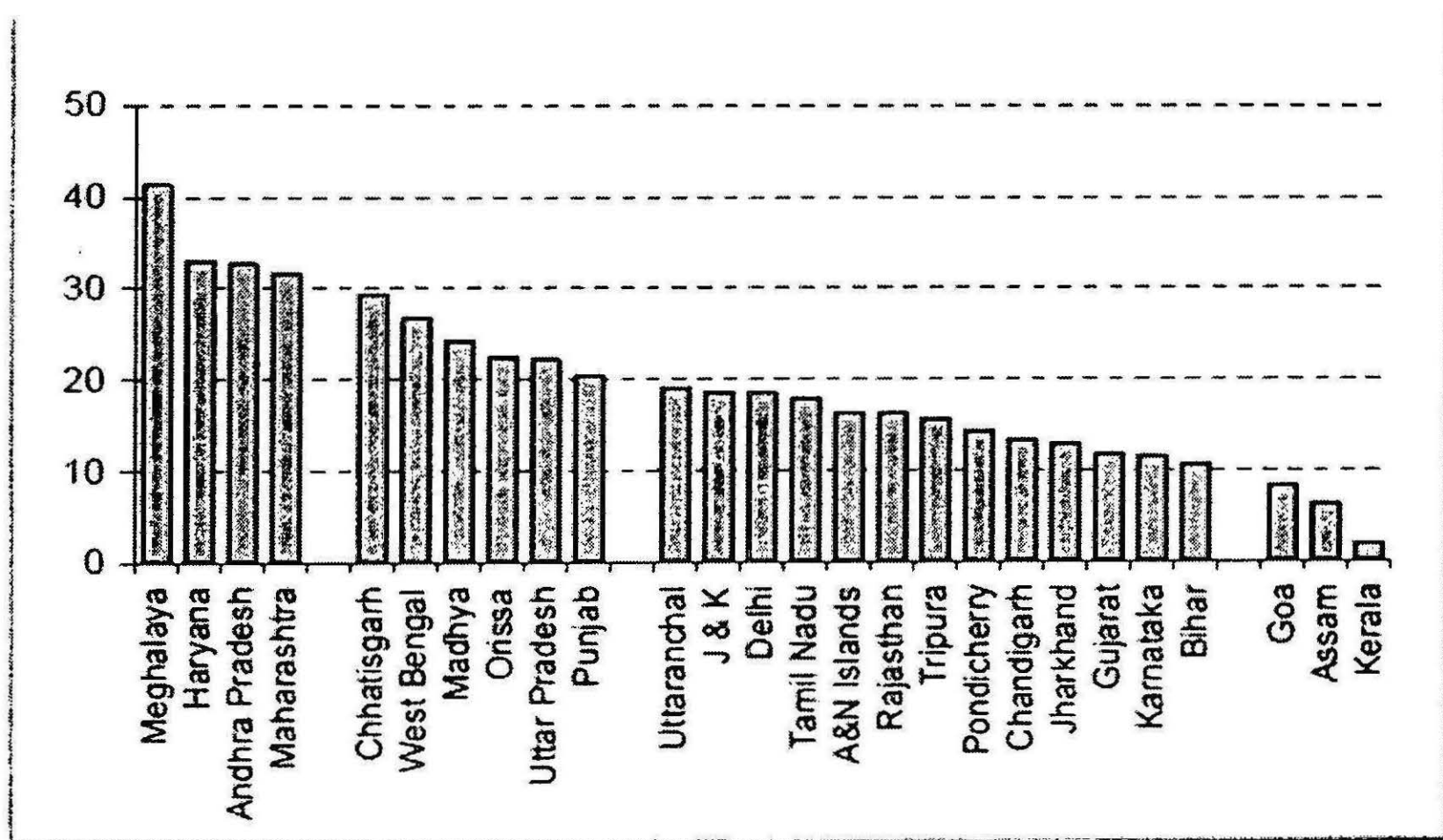
There has been a growth of 17.8 million in urban slum population of the country in the last decade. The Pranab Sen Committee states that the projected slum population in the country for the year 2011 would be 93.06 million from the 75.26 million estimated in 2001(The Economic Times, September 2010).

II 2.4 Growth of slum in India and Metros

There are some states in India like Meghalaya and Haryana where 30-40 percent of urban population is living in slums. In Delhi about 20 percent urban population was living in slum according to 2001 data. It is less than some states like Meghalaya and Uttar Pradesh but it is much more than Assam and Kerala (figure 2.10). In India one out every seven person living in the urban areas lives in the slums. And 23.6 percent population of the slum reporting town's lives in the slums. Meghalaya have shown exceptionally high incidence of slum i.e. 65 percent of the slum reporting towns. Some the states have shown very high incidence of slum than the national average. These include state like Haryana, Chhattisgarh Madhya Pradesh, Maharashtra and Andhra Pradesh. However all urban centers of India do not have slum. Only 640 out of 5161 urban areas have reported slums. In other world only 12.7 percent of total Indian towns have reported slum (Kumar et al, 2007).

The following tables and figures show the statistics related percentage of slum population in different Indian states.

Figuer-2.10: Percentage of urban population living in slum by state in 2001



Source: Census 2001 cit in Chandrasekhar,(2005) pp 3.

There are both notified and non notified slums in India. Non notified slums are not recognized by the government. They are treated as illegal and do not get any civic

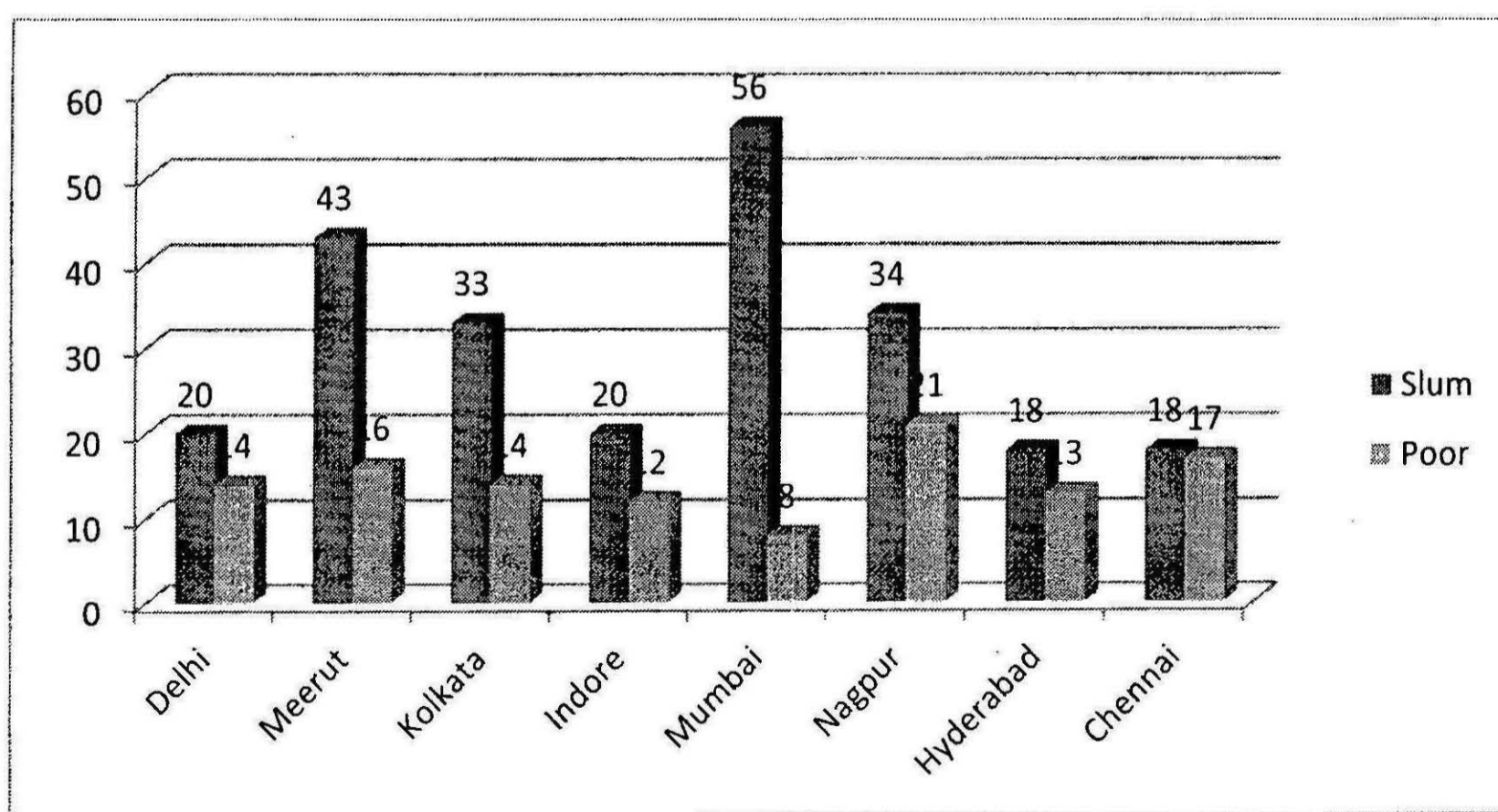
amenities. According to 65th Round NSS data, there are more non notified slums in Delhi than notified slums. Maharashtra, Andhra Pradesh, Tamil Nadu and Uttar Pradesh have more notified slums (Table-2.3).

Table-2.3: Details of Notified and Non-Notified Slums

State/UTs*	Estimated number of slums - 65th Round NSS Survey (July 2008 to June- 09)		
	Notified	Non-Notified	Total
Andhra Pradesh	3964	1285	5249
Delhi*	1058	2075	3133
Gujarat	1342	2017	3360
Karnataka	1118	1132	2250
Madhya Pradesh	759	1456	2215
Maharashtra	9282	7736	17019
Orissa	630	1323	1953
Tamil Nadu	1711	1663	3374
Uttar Pradesh	1334	1060	2394
West Bengal	2475	2570	5045
ALL-INDIA	24781	24213	48994

Source-GOI, 2011

Figure-2.11: proportion of slum households and urban poor households in selected cities, India, 2005-06



Source-Gupta et al (2009), pp 23

The highest proportion of slum households was found in Mumbai (56 percent) followed by Meerut (43 percent) and Nagpur (34 percent). Delhi has 20 percent of

households living in slums. Nagpur has the highest proportion of poor households (21 percent). Delhi has 14 percent poor households (Figure-2.11).

Table-2.4: Status of Improvement in Civic Amenities in Slums

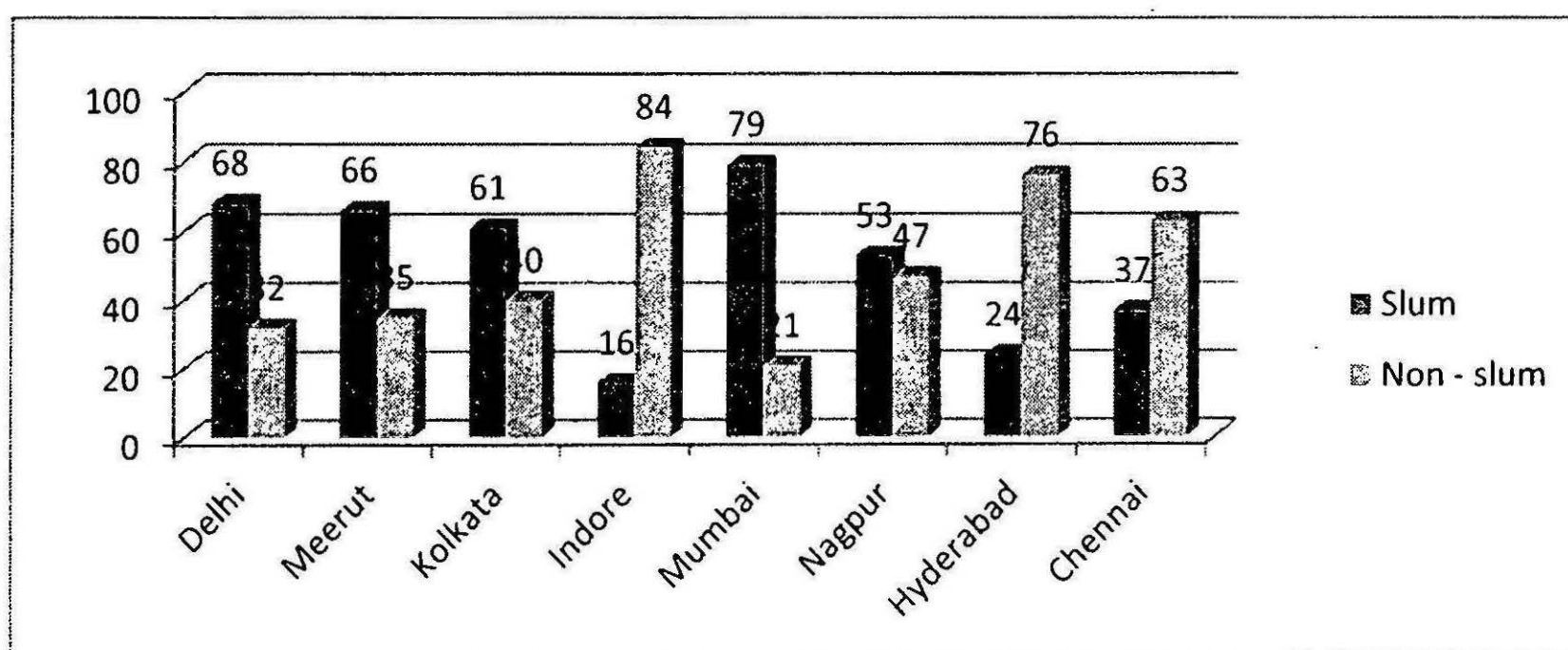
	Notified			Non-notified		
	Improved	no change	Deteriorated	Improved	no change	Deteriorated
Road within slum	52.7	44.8	2.5	21.1	65.7	13.2
Approach road to the slum	51.1	46.3	2.6	40.1	56.7	3.3
Water supply	47.9	48.1	4	31.6	62.5	5.9
Electricity	34.5	64.4	0.1	27.1	70.4	2.5
Street Light	39.4	59.8	0.8	22.7	77.4	2.8
Latrine	49.6	47.8	2.7	33.1	62.4	4.5
Drainage	46.6	50.1	3.3	22.5	66.3	11.2
Sewerage	23.8	71.3	4.9	41.4	54.7	4
Garbage disposal	5.7	88	6.4	15.4	76.6	7.5

Source: NSSO 2003

The condition of notified slums is better than non notified slums. Road within slum has improved by 52.7% in notified slum. Condition of garbage disposal is very poor in notified slum. Only 5.7% have improved. Condition of garbage disposal has deteriorated by 6.6 percent in notified slum. In non notified slum road within slum has deteriorated by 13.2 percent and drainage has by 11.2 percent. (Table-2.4)

Delhi has the highest share of poor living in slum (68%) followed by Meerut (66%) and Kolkata (61%) (Figure 2.12).

Figure-2.12: Distribution of poor living in slum and non-slum areas in selected cities, India, 2005-06



Source-Gupta et al (2000), pp.24.

All urban poor the percentage distribution of poor in slum and non slum. In Delhi, Meerut, Kolkata, Mumbai and Nagpur more poor are living in slum. But in Indore, Hyderabad and Chennai more percentage of poor are living in non-slum area (figure 2.12).

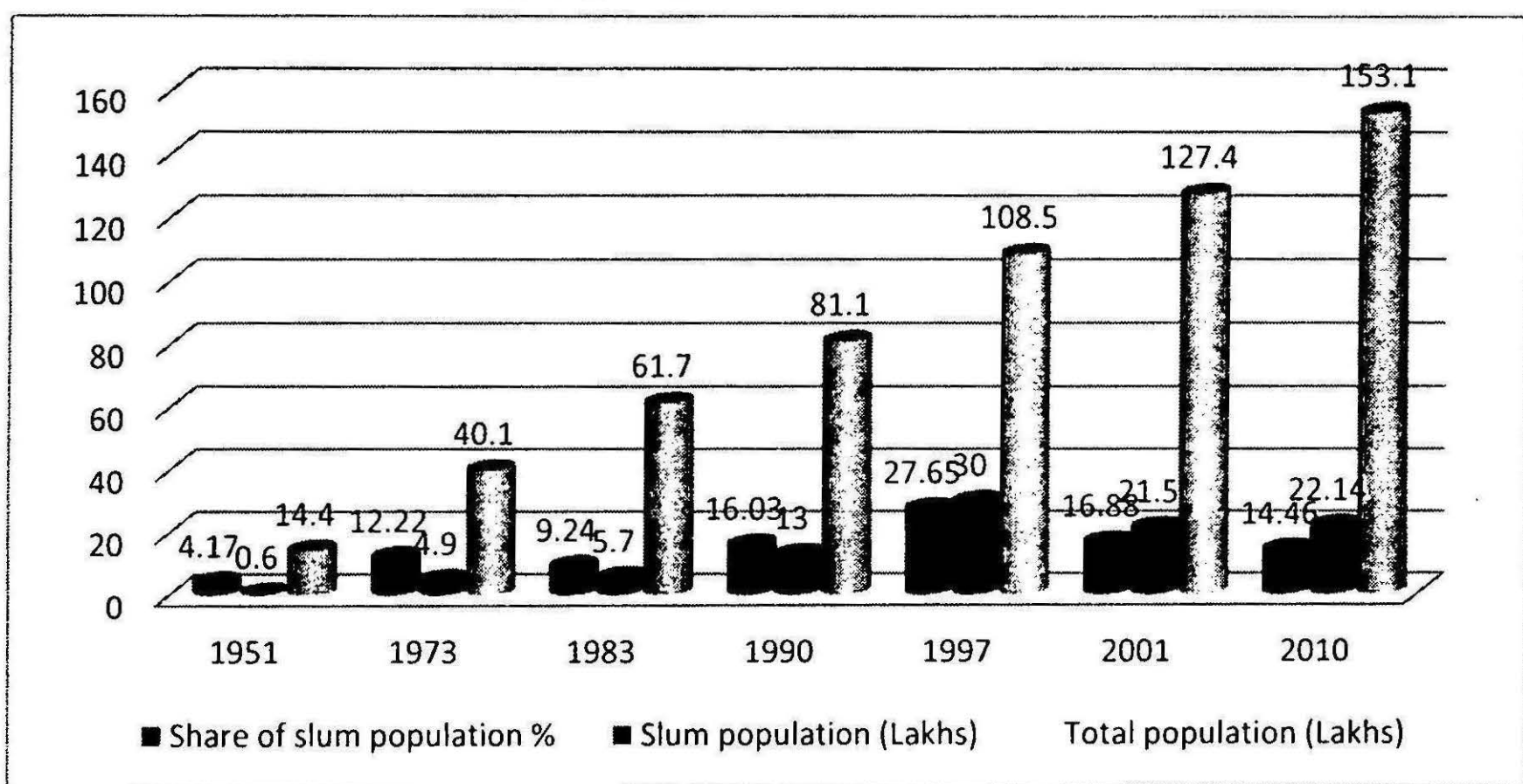
II 2.5 Slums in Delhi – Some Key Issues

Delhi is a metro city with large number of JJ clusters and slums. The city has its own history of development as a capital city and hence the urban structure cannot be attributed to global changes alone. Historically, Delhi has a long tradition of image building as a capital city, from the projection of the imperial power (Mughal and then British) to the “visual symbol of a new republic” (Evenson, 1989: 184). The capital city Delhi has a population of 16753235 of which the urban population is 16333916. (Census of India,2011). In India slum population is 42,578,150 and slum population in Delhi is 2,029,755 [Census of India, 2001].

Delhi has both planned and unplanned settlements. The planned settlements are either ones built by the Delhi Development Authority or private authorities. The unplanned settlements often develop into slums (Ahmed and Choi, 2011).

A large population in Delhi lives in slums. The following figure shows growth in slum population and percentage of population living in slums.

Figure-2.13: Growth of slum population in Delhi



Source: CGDR, 2011, pp 10.

There was an increase in percentage share of slum population between 1951 and 1997. There was a very sharp increase between 1990 and 1997. But after that there has been a decline. From 27.65 percent as the slum population in 1997, in 2010 14.46 percent of the population lives in slums. But still a large number, 22.14 lakh live in slums (Figure 2.13).

II 2.6 Classification of Settlements in Delhi

Settlements in Delhi are both planned and unplanned. Unplanned Settlements have developed into slums. The unplanned settlement has several types. Settlements in Delhi have been classified in the following manner (Ahmed and Choi, 2011).

1. Planned settlements- That have been planned by DDA or private agencies. 24 per cent of the population a lives in these settlements.

2. Unplanned settlements-There are several categories under this.

a- Unauthorized colonies (UAC)- These settlements developed on agricultural land without permission from any authority. In 1993, there were 1,071 unauthorized colonies. Estimated 0.74 million people that is approx. 5.7 per cent of Delhi's inhabitants live in these.

b-Regularized unauthorized colonies – This kind of settlement was unauthorized but has been regularized .In all 567 colonies were regularized in 1977, and at present, a total of 1.76 million people live in this type of settlement, i.e., 12.7 per cent of Delhi's total population.

c- Urban villages (UV) – These settlements existed as rural villages from a long time. After rapid urbanization, they fell into urban areas but have few urban amenities. When Delhi had its first master plan (1962), about 20 villages located within the urban area were declared to be urban villages, a figure which has now grown to 135. Around 0.88 million people, i.e., approx. 6.4 per cent of the city's population lives here.

d- Rural villages (RV) – About five per cent of the population live in rural villages.

e- Jhuggi jhopdi clusters (JJ clusters) – These clusters of settlements mostly arose on public or private land. They have very poor amenities and fear eviction. Government of Delhi conducted a survey in 1990 that estimated around 260,000 households were

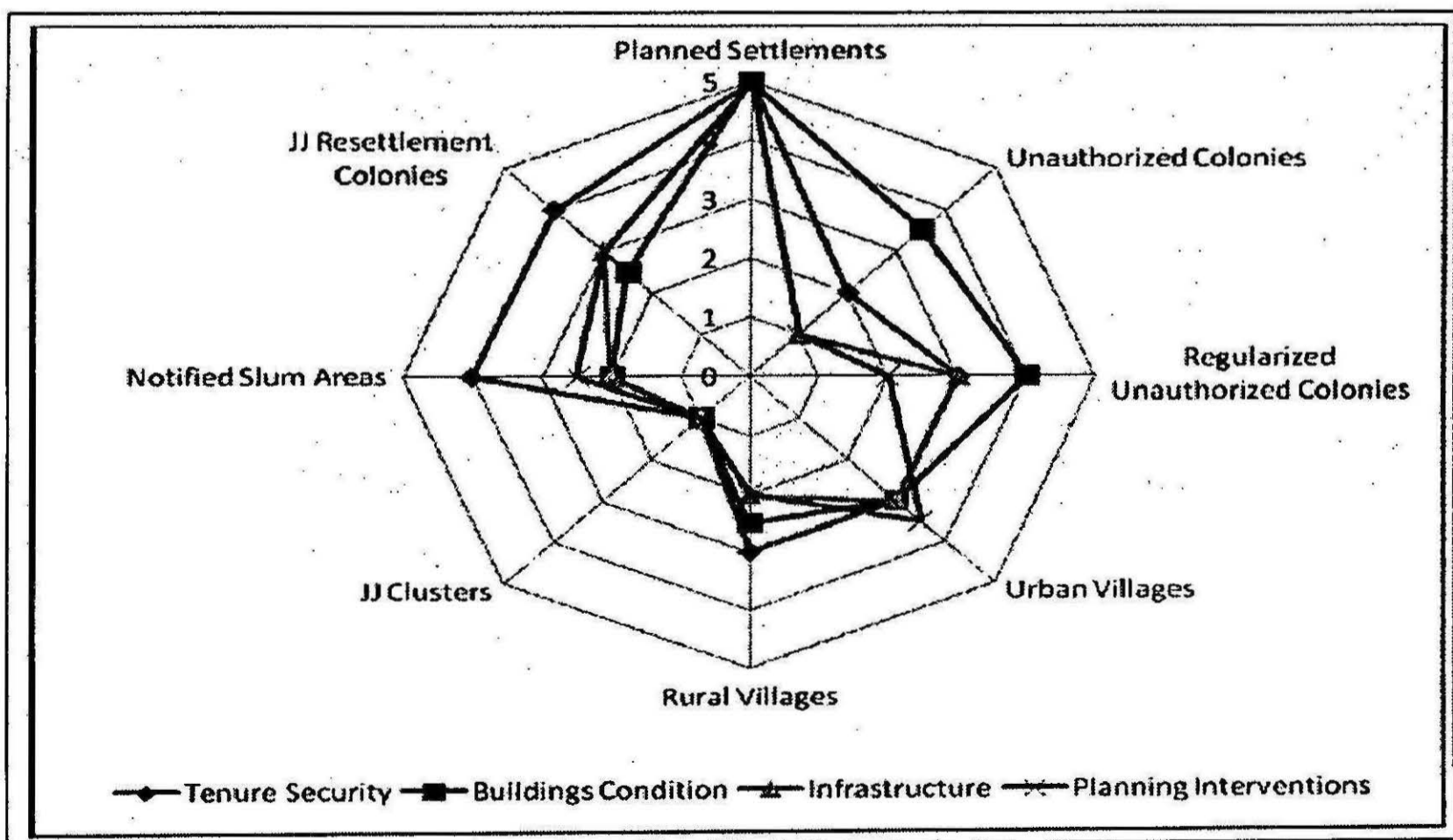
located in 929 JJ clusters (Government of the National Capital Territory of Delhi 2000). These type of settlements currently house 600,000 households in 1,071 JJ clusters, which is about 2.07 million people, or 14.8 per cent of Delhi's population.

f- Notified slum areas- these are slums that have been notified by Government. They have security of tenure but not many amenities At present, 2.66 million people live in such slums, which accounts for 19.4 per cent of the entire population of Delhi (Figure 2.14).

g-JJ resettlement colonies – The resettlements took place in the 1970s by relocating squatters and slum households from the heart of the city to its periphery in order to improve their living conditions. Presently there are 44 JJ resettlement colonies. The total estimated population is 1.7 million, i.e., about 12.7 per cent of Delhi's population (Ahmad and Choi, 2011).

According to census data from 2001, Delhi's urbanization level was 93.01 percent, and numerous studies and governments documents reveal that more than half of these residents live in unplanned settlements, including slums, squats and unauthorized colonies (Dupont, T et al. 2000; Sivam 2003; Kumar 2006; Kumar 2008). In short, the trend in population growth shows that Delhi was a growing city (Kumar 2006).

Figure-2.14: Vital characteristics of settlements in Delhi



Source- Ahmed and Choi, 2011, pp 81.

Table-2.5: Percentage of households living in slum for the first time or more and distribution by earlier stay

Zone	Percentage of households Staying in slum for the first time	Percentage of households Staying first time in a slum by earlier place of residence				Percentage of households by number of Slums they have stated before coming to the present one					
		Rented Houses	Own Houses in a city	village	All	Number of slums					
						1	2	3	5	10	All
Central	70.8	51.3	4.8	43.8	100	95.4	4.6	0	0	0	100
East	97.8	28	1	71	100	92.3	0	7.7	0	0	100
North	94.2	14.2	7.9	77.9	100	82.7	0	3.1	11.1	3.1	100
South	97.4	9.4	3.3	87.3	100	91.4	5.5	3.1	0	0	100
West	97.6	8.1	3.6	88.3	100	90.6	0	9.4	0	0	100
All	95.4	15.5	3.8	80.7	100	90.4	2.7	3.7	2.5	0.7	100

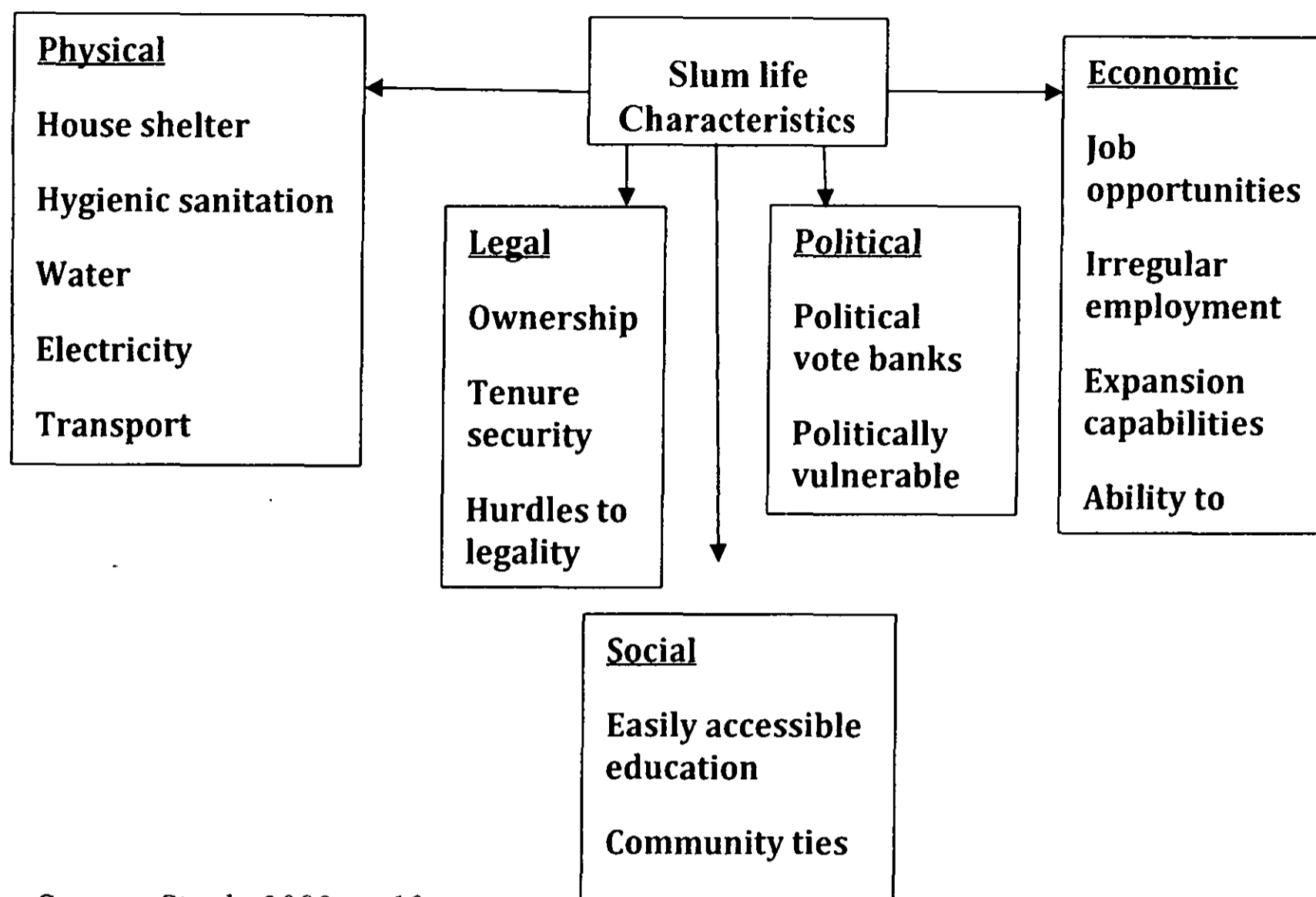
Source: CGDR, 2011, pp.34.

In Delhi slums, while some persons have just shifted from one slum to another, others are living in the slum for the first. One study found that almost 95 per cent of the households which were interviewed reported staying in a slum for the first time (CDGR, 2011). In central Delhi there are about 30 percent households who had lived in slum before moving to the current slum. Many of the households living in Delhi slums have migrated from villages. Across zones, households coming from village vary between 43.8 per cent in Central to 88.3 per cent in West Zone. However, in central zone 51.3 per cent of the households stayed in rented accommodation before coming to the slum (Table -2.5). About 25 – 35 percent of the households staying in slums of Delhi are staying for 15 years to 30 years. Less than 15 percent of households are staying for ten years or less. Less than five percent households are living for more than 40 years (CDGR, 2011).

II 2.7 Characterizing Life in Slums

A universal characteristic is slum overcrowding and congestion, extremely poor sanitation, lack of civic amenities and deviant behavior. An understanding of current situation of slums is necessary to analyze these factors. This situation can be categorized into physical, legal, social, political and economic characteristics of living in slums (Singh, 2009).

Figure-2.15: Characteristics of Slum Life in Delhi

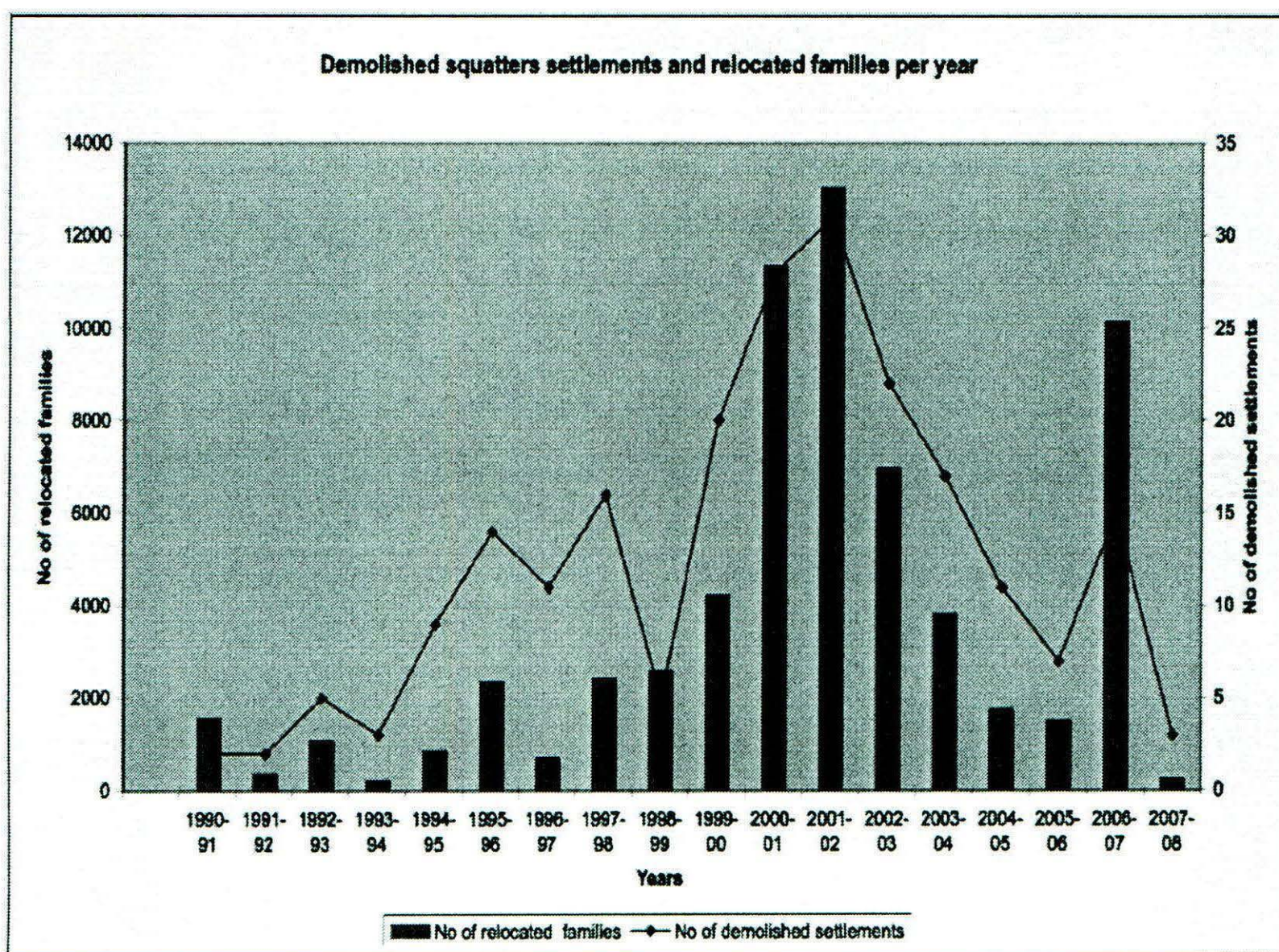


Source- Singh, 2009, pp10.

Living in slums also has its social problems. One study found that ninety-nine percent households reported ‘Illiterate people’ as one of the biggest problem they face, this is followed by ‘quarrel on petty matters’ reported by 53.0 percent of the households, 41.0 reported threat by ‘Govt. Authority Officials’, 33 per cent ‘Eve Teasing’ and 22 percent ‘Use of Abusive Language’. The study was done in different zones of Delhi and it was found that Eve Teasing was reported the maximum at 52 per cent in West zone followed by 41.0 percent in South and 26.0 percent in North zone. Other social problems were also reported in the slums of Delhi. Incidence of ‘Gambling’ was reported by maximum number of households being 46.7 percent in West, and 36.3 percent in South (CDGR, 2011).

Since a large number of slums are not notified, they are treated as illegal. People living in these slums do not have security of tenure. They can be evicted any time by the government for beautification of the city. The following figure gives data about eviction from slums.

Figure-2.16: Demolished squatter settlements and relocated families per year: 1990-2008



Source -Dupon,, 2011,pp11.

The above chart (Fig 2.16) shows that demolition has slowed down in Delhi, which is actually a misleading fact as most of the demolition have happened in last moment without a process of resettlement specifically during commonwealth games (Dupont, 2011).

II 2.8 Civic Amenities in Slums of Delhi

A study called ‘Analysis of Slum Area in Delhi & Alternative Strategies of Rehabilitation’ (CGDR, 2011) has done a detailed study in 65 slum clusters in Delhi and gives a profile of 447 slums in Delhi. The findings give us information about condition of slums in Delhi.

A Jhuggi can be sold and purchased at an average price of Rs 40,243. It was found that only 3.14 per cent slums have kutchha roads. Remaining have concrete or mixed type roads. Only 44 per cent of the total 477 slums have street lighting and supply of electricity is not much different from non slum area. The average number of hours of load shedding during summer was reported at 2.43 during summer and 0.90 in winter (CDGR, 2011).

Out of 477 slums, 455 (95.39 per cent) have one or the other source of drinking water and only 4.61 per cent reported not having any such facility. Such persons fetch water from the close by localities. But very few slums have regular water supply. Out 44.23 per cent slums reported regular water supply by Delhi Jal board. In 55.77 per cent not receiving regular supply, the frequency of water supply is reported by 76.69 per cent, twice daily in 24 hour & thrice daily reported by 14.29 per cent. This is a major problem in slums and affects sanitation and hygiene. Out of 477 slums, 354 (74.21 per cent) have common toilet facility inside the slum and the remaining 25.79 per cent reported no such facility. The Delhi Administration had provided toilet facility in only 30.6 per cent of the slums. Lack of sanitation is also caused because the MCD does not provide services in all slums. Out of 477 slums, only 43.61 per cent reported regular visit by MCD sweepers. Most of the amenities like bus stand, railway station, post office, pucca road, schools collages, PHC, Govt. Dispensary etc were located close by. At least 17 per cent of slums have everything within a radius of one kilometer. Most of the slums in Delhi lack proper government health care facility. It was found that out of 477 slums; about 89 per cent are without any government dispensary inside the slum. In absence of government dispensary, provisions are there to help slum residents through specific health camps for immunization and health checkups. Most of the slums have presence of some or the other NGO. 36 organizations are reported to be working in 188 (39.41 per cent) slums out of 477 total slums. Activities of these organization include Slum cleanliness, arranging for loan, general and physical education, women training, child care, food supplement, clothes, medicine, helping immunization program, helping pensioners and old age people etc (CDGR, 2011).

II.3 Morbidity Pattern

The National Sample Survey provides morbidity related data in India. NSSO data from various rounds like the 28th Round, 46th Round, 52nd Round, and 60th Round show trends in morbidity in India. NSSO records both chronic diseases and acute diseases. Chronic diseases include diseases like tuberculosis, leprosy, epilepsy and piles. Acute diseases include diseases like measles, cholera, dysentery and diarrhoea.

NSSO data is based on self perceived morbidity. Prevalence of morbidity is measured as the number of persons reporting ailment during 15 days per 1000 persons. The

following data shows morbidity rates for selected diseases from 28th (1973-74) and 52th (1995-96) round.

Table-2.6: Disease-specific morbidity rates for selected diseases in India from the NSS 28th and 52nd Rounds

Diseases	Rural		Urban	
	1973-74 (28 th round)	1995-96 (52 nd Round)	1973-74 (28 th round)	1995-96 (52 nd Round)
Chronic diseases: incidence rate (per 100,000)				
Tuberculosis	117	83	137	63
Leprosy	40	11	25	9
Epilepsy	28	14	17	24
Piles	65	13	61	32
Acute Diseases : incidence rate(per 100,000)				
Measles	17	11	14	14
Cholera	3	*	3	*
Dysentery	12	*	35	*
Diarrhoea	27	*	22	*
Diarrhoea & Dysentery (including Cholera)	*	269	*	230
Injuries due to accidents	39	63	54	83

Note* indicates that data on the specific disease were as not collected separately in the survey.

Source: NSSO (1998) *Morbidity and Treatment of Ailments, the 52nd round, (Report No. 441)*
Cited in-Nayanatara, 2006, pp.10.

On comparing data from NSS 28th and 52nd rounds it is found that prevalence rate of selected chronic diseases had declined. It had declined in both urban and rural areas. In rural area prevalence of tuberculosis in 28th (1973-74) round was 117. It declined in 52nd round to 83. For urban areas in 28th round were 137 and decline to 63 in 52nd Round. For Acute diseases like diarrhoea, dysentery and cholera information was not collected separately in the 52nd Round (Table-2.6).

Suryanarayana (2008) has classified a set of diseases as diseases associated with deprivation. These diseases include eye ailments, skin related, febrile illness, disabilities, respiratory illness, accidents, gastro intestinal infection & infestations. Using NSS 60th round data he found that in India 57.21 percent diseases in urban areas and 64.01 percent diseases in rural areas are diseases associated with deprivation.

Health conditions in slums is poor not only in India but across the world. Communicable diseases are the major problem in slums. Some of the common diseases are diarrhoeal diseases, worm infections, tuberculosis, acute respiratory infections, Vaccine-preventable diseases such as measles, diphtheria, and whooping cough dengue and other vector borne diseases. These are caused by poor living condition in the slum like poor sanitation, lack of toilet, water login and overcrowding (Sclor et al, 2005).

Along with national level data, there are also many micro studies which give us data on morbidity in slums. A study done in slums of Delhi show that overall morbidity prevalence was 15.4 percent. It was higher in female (16.3 Percent) than for male (14.7percent). The study was found a higher prevalence of respiratory ailments among slum dwellers (Sharma et al, 2009).

Table-2.7: Profile of incidence and neglect of Temporary illness in Delhi: Top ten diseases

Most frequently Reported Temporary illness in the sample	% of all cases of All Aliments Reported	Most Frequently Reported Temporary illness for which medical treatment is not sought	% of All Untreated cases of All Aliments	Diseases with the highest Proportion of Reported cases not seeking medical attention	% of Untreated cases for each Aliments
Fever of unknown origin	18.96	Fever of unknown origin	17.21	Hearing disability	43.53
Other diagnosed ailments	14.63	Other diagnosed ailments	13.45	Visual disability (including blindness)	40.35
Respiratory including ENT ailments	7.09	Disorder of joints and bones	9.14	Speech disability	30.52
Disorder of joints and bones	6.56	Respiratory including ENT ailments	8.71	Cataract	38.24
Hypertension	5.20	Other –non diagnosed ailments	5.82	Other –non diagnosed ailments	33.80
Diarrhora/dysentery	4.98	Diarrhora/dysentery	4.99	Loco motor disability	30.71
Gastritis/gastric of peptic ulcer	3.66	Cataract	3.97	Psychiatric disability	26.47
Bronchial asthma	3.63	Loco motor disability	3.82	Eruptive disorder	23.13
Diabetes mellitus	3.56	Dermatological diseases	3.01	Glucoma	23.03
Heart disease	2.70	Visual disability (including blindness)	2.93	Mumps	21.51

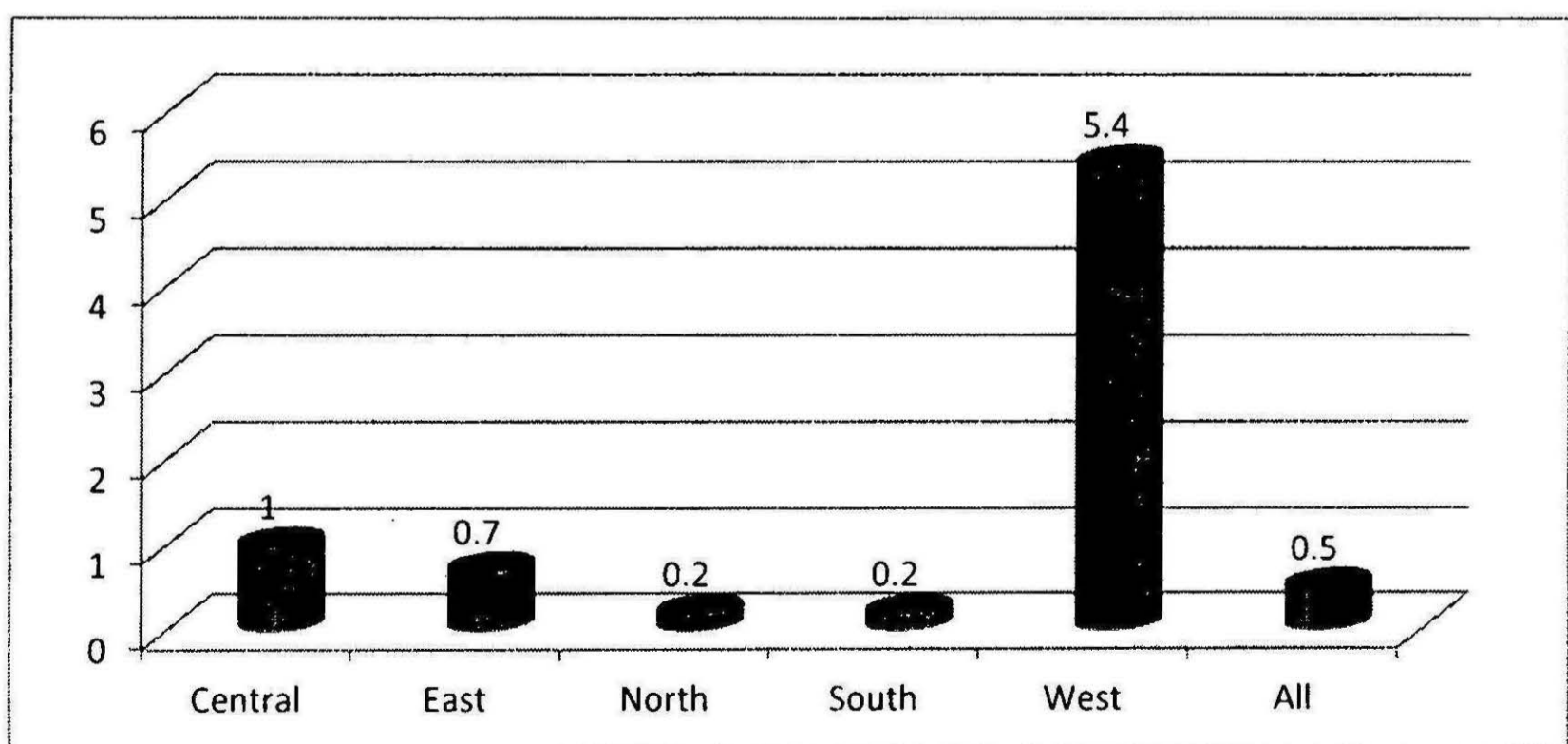
Source: NSS 60th round data. Cited in Mukherjee and Karmakar(2008).

Mukherjee and Karmakar (2008) have used NSS 60th round data to show that fever of unknown origin is the most frequently reported illness. It is also the most frequently neglected illness followed by other diagnosed ailments, disorder of joints and bones. In terms of the proportion of reported cases for a particular disease for which medical attention is not sought hearing disability tops the list. The most neglected ailments are also those that occur in old age. These are possibly considered normal for old age. (Mukherjee and Karmaka, 2008). Under nutrition is also a major problem and shows high level of poverty in slums (Table- 2.7).

II.3.1 Morbidity in Delhi Slums

A research done by Centre for Global Development Research (CGDR, 2011) on conditions of slums in Delhi, gives data on conditions of slums in Delhi. The study was done in slums in different parts Delhi. On an average about 0.5 per cent households in these slums reported illness. The maximum incidence of reported illness was in west zone at 5.4 per. The least percentage of reported illness was from north and south zone at 0.2 per cent. The report also mentions that the western zone is seriously lacking in garbage handling facilities and cleanliness, which could be the possible reason for highest incidence of illness in that zone (figure 2.17).

Figure-2.17: Percentage of households reporting illness in Delhi Slums during last three month preceding survey



Source: CGDR, 2011, pp 24.

The CDGR study also found percentage distribution chronic and acute illnesses among slum population of Delhi. It was found that among chronic ailments the largest

percent was reported for TB at 62.5 percent followed by 11.4 per cent asthma. Incidence of arthritis, heart attack and stone was reported by 7.3 per cent each; while 4 per cent reported cancer. Incidence of TB is high in all the 5 regions.

In case of other (non-chronic) diseases, 57 per cent reported suffering from fever, 23 per cent dengue, 4 per cent malaria, 4 per cent jaundice and remaining 12 per cent reported cough & cold, cataract and chicken pox (Table -2.8).

Table-2.8: Distribution of population reporting illness by type of chronic and other diseases

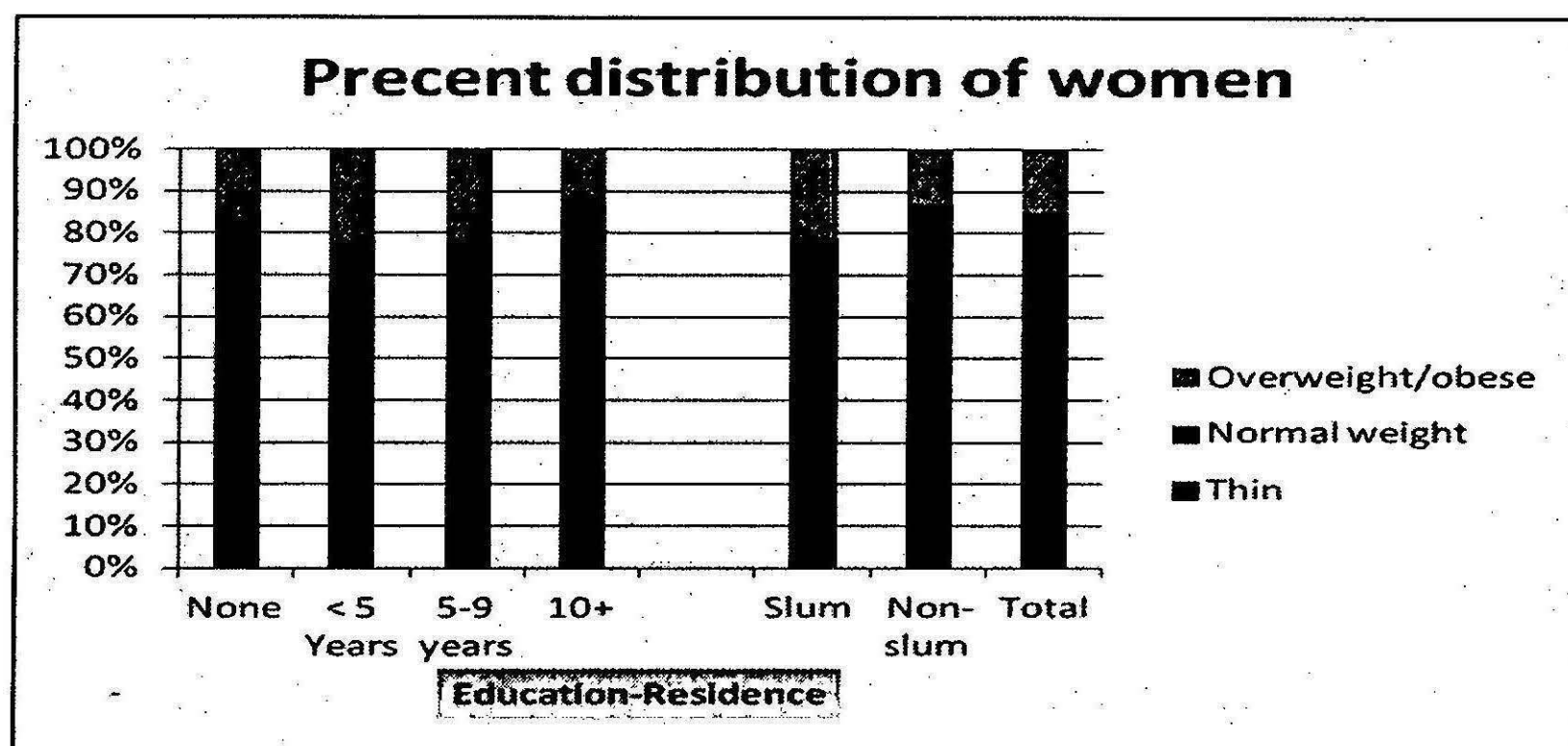
Diseases	Central	East	North	South	West	All
Chronic						
Cancer	0	13	0	0	0	4
Arthritis	0	0	0	0	17	7
Heart attack	0	0	0	0	17	7
Stone	0	0	0	0	17	7
TB	100	75	100	69	42	62
Asthma	0	12	0	31	8	11
Grand Total	100	100	100	100	100	100
Other diseases						
Cough & cold	0	0	0	0	14	4
Fever	82	100	54	34	43	57
Jaundice	0	0	0	15	0	4
Malaria	0	0	46	0	0	4
Cataract	18	0	0	0	0	3
Dengue	0	0	0	51	28	23
Chicken pox	0	0	0	0	14	4
Grand Total	100	100	100	100	100	100

Source: CGDR, pp.24.

Malnutrition

NFHS -3 data for Delhi shows that 21 percent of women in slums have low weight for height compared to 14 percent women in non slum area. Overall in Delhi 15 percent of women and 16 percent of men are too thin (Figure 2.18). In Delhi a total of 26 % women were found to be obese. But a higher proportion of women were obese in non slum area (29%) compared to slum area (20 %). It was also found that those who had more than ten or more of education were more obese than others. Overweight and obesity are most common in older adults and those in the highest wealth quintile. Almost half of women (49%) and one-third of men in their forties are overweight or obese in Delhi (IIPS and Macro International, 2009).

Figure-2.18: Weight for Height of Women in Delhi Slums

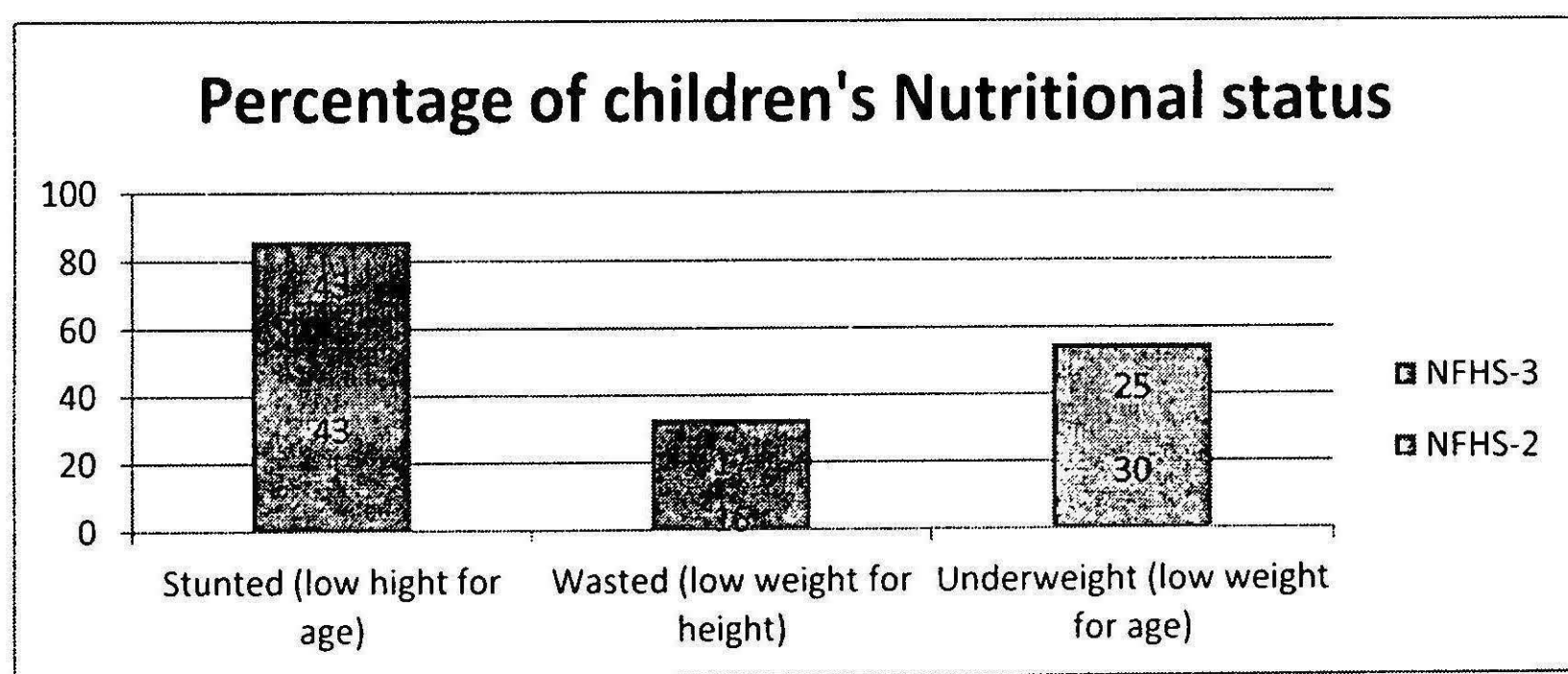


Source- IIPS and Macro International, (2009).

As regards under nutrition among children in Delhi, 43 percent of children under age five are stunted. This means that they are too short for their age, which indicates that they have been undernourished for some time. 17 percent children in Delhi are wasted, or too thin for their height. This may result from inadequate recent food intake or a present illness. 25 percent are underweight, which takes into account both chronic and acute under nutrition.

Even during the first six months of life, when most babies are breastfed, 11 percent of children are stunted, 35 percent are wasted, and 23 percent are underweight. This is from evident from NFHS-3(Figure- 2.19).

Figure-2.19: Trends in children's Nutritional status



Note- Nutritional status estimated are based on the 2006 WHO- International references population
 Source- IIPS and Macro International, (2009).

A study in urban slum in Mumbai found that 17.6 percent of boys were stunted. This was almost similar to tribal boys of the same age group. 17.8 percent boys were stunted. This study concluded that high level of stunting in urban areas were not related to food scarcity, but to environment and social factors such as access to health care, clean drinking water, repeated childhood infection, mother's nutrition and her ability to breastfeeding. This was related to the uncertain availability of casual wage employment, especially for women. (Hatekar and Rode Cited in Madhiwalla, 2007). Reports by UN-HABITAT also show that prevalence of diseases (pneumonia, diarrhea, malaria, measles and HIV/AIDS) in urban slums is due to bad living conditions rather than income levels (Mundu and Bhagat, 2008). Slums dwellers have extremely poor amenities. In one of the slums in Khandivaly one tap in the slum is shared by 4367 persons (Mundu and Bhagat, 2008). Pawar et al (2008) social determinants'(social gradient, employment, social exclusion, stress etc) and suboptimal health behaviour practices pertaining to safe water consumption, prevention of mosquito born diseases, contraception, place of delivery, breast feeding patterns, immunization status of children, and management of diarrhea; with morbidity in slums of Surat. After controlling for the socioeconomic and demographic factors, morbidity was significantly associated with increased social exclusion and social support and decreased physical activity. Stress was another important predictor explaining the morbidity condition.

II.4 Health Related Issues in Slums

Persons living in slums have to face many health problems. They also have difficulty in access to healthcare. NFHS3 (2005-06) data also show that living condition of slum and urban poor are very bad and all facilities are not available. Sanitation, safe drinking water and toilet facility affect living condition and health. Delhi, Kolkata, Mumbai, Nagpur, Indore, Hyderabad and Chennai are small differences between slum and non-slum areas in pipe drinking water. In Meerut there is large difference between slum and non-slum area in pipe drinking water. But it does not show if enough water and regular water supply is available for each household.

In every city, the use of improved sanitation facilities is much worse in slum areas than in non-slum areas, in both notified and non-notified slum. Not even one out of every four slum households (according to the census definition), use improved toilet

facilities in four cities (Chennai, Delhi, Mumbai, and Kolkata). In slums in Meerut, Delhi, and Nagpur, the members of about one in six households defecate in the open (Gupta et al, 2009).

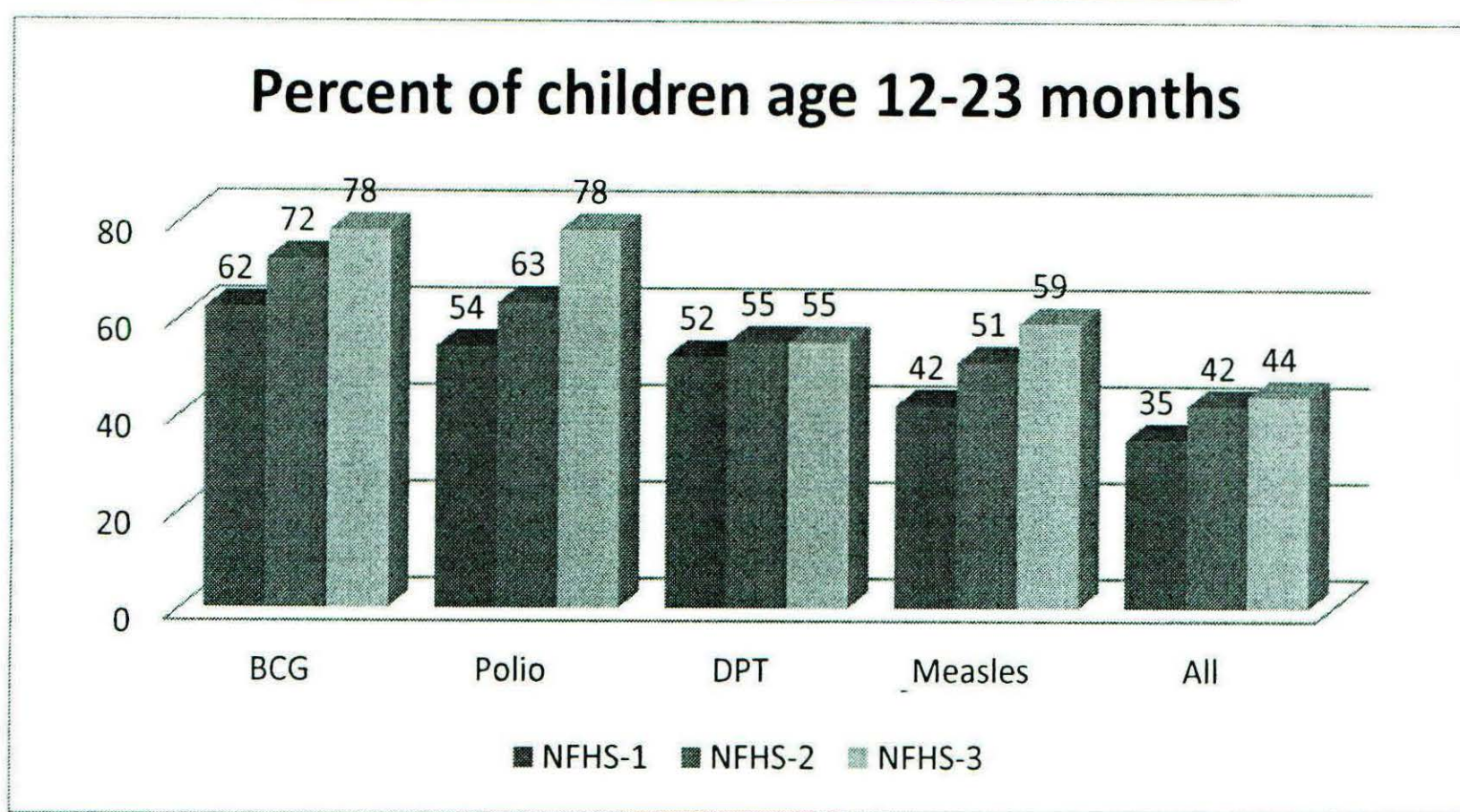
Health scheme coverage and other scheme coverage are low for urban poor. A large majority of poor households in every city do not have a BPL card. Only a very small proportion of households in slum areas and only a negligible proportion of poor households in these cities are covered under any health scheme or health insurance.

There are many factors and situation which make slum dwellers vulnerable to poor health. These include their economic and social conditions. For many people there is irregular employment and poor access to fair credit and so financial difficulty. Social conditions like alcoholism, gender inequity, and poor educational can also be found. The living environment also increases risk to poor health. There is poor access to safe water supply and sanitation facilities, overcrowding, poor housing and insecure land tenure. Other factors include poor access to ICDS and primary health care services health care services poor quality of health care. Many slums are not notified in official records and remain outside the purview of civic and health services. Temporary migrants are more vulnerable because they do not have access to health services and other development programmes as are moving from one place to other and it is difficult to track them and provide follow-up health services to recent migrants (Agarwal et al, 2007). Some other factors are) Lack of information about government health programmes and facilities, ill-treatment and bad behavior at government hospitals and) Inadequate food intake and low levels of nutrition (Pande, 2005).

II.4.1 Access to health care and health care seeking

Access to health care services is necessary for good health. Primary level health care is provided by the government. Therefore everyone should have equal access to these services. But this is not the case. There are some indicators from which we can get an idea about differences in access to services. Some of these indicators like coverage of vaccination for children, Anganwari services, antenatal care and services during delivery are discussed using NFHS data.

Figure-2.20: Trends in Vaccination Coverage in India



Source- : IIPS and Macro International, 2007.

Figure 2.20 shows trends in vaccination coverage of children age between 12 to 23 months during 1992-2007. Total vaccination coverage is very low. It has improved from 35% during NFHS-1 to 44% during NFHS-3. BCG and Polio vaccination have better coverage (78%) compared to DPT and Measles vaccination. Due to low vaccination coverage, more children can fall ill due to vaccine preventable diseases. Vaccination by sex, by place of residence and by state reflects there are wide differences. Only 42% female as against more than 45% males; and 39% rural as compared to 58% urban have received all basic vaccinations.

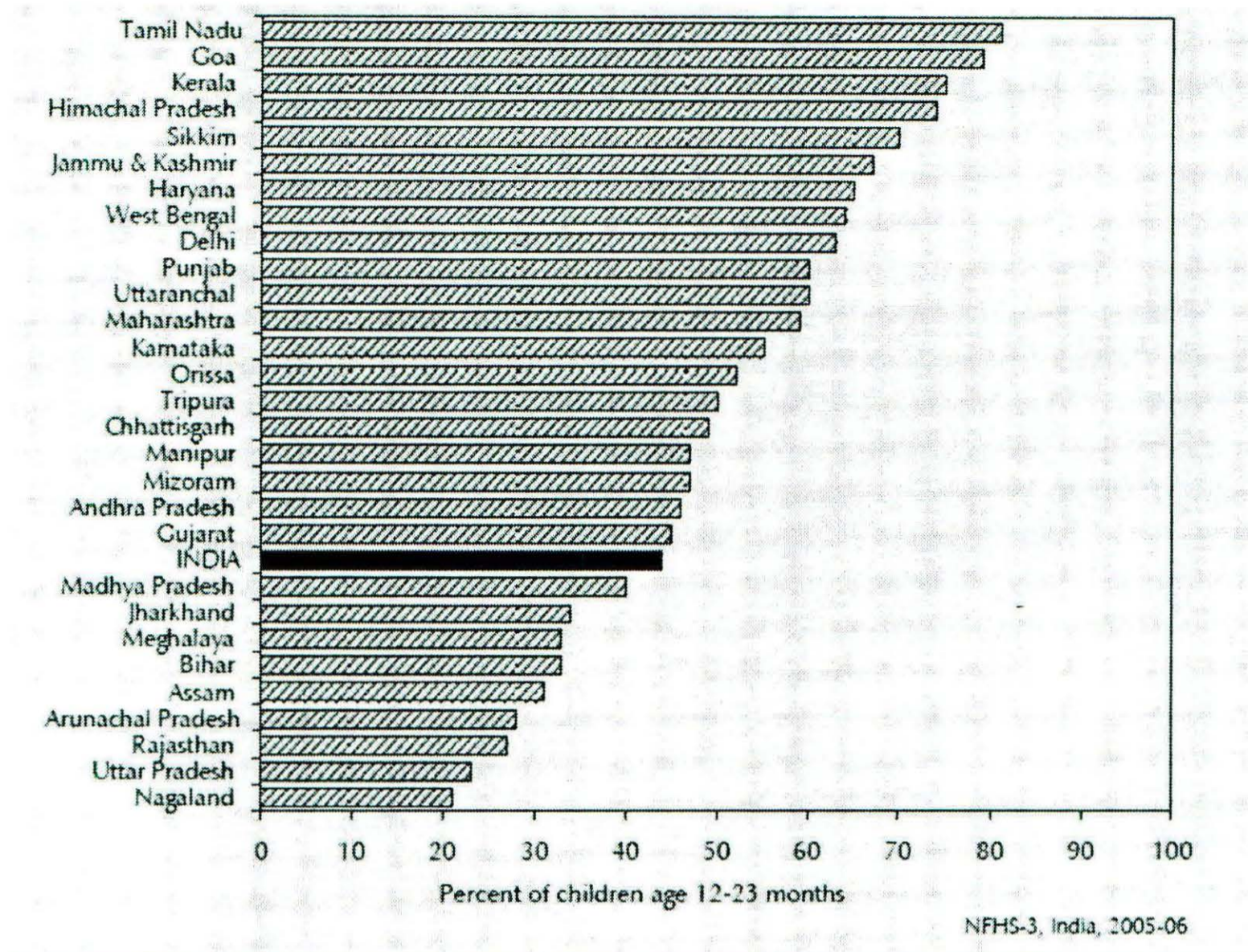
Table: 2.9: Coverage of Vaccination by sex and Place of residence

	All basic Vaccinations	No Vaccinations	Percentage with a vaccination card seen
India	43.5	5.1	37.5
Male	45.3	4.3	38.8
Female	41.5	6.0	36.1
Urban	57.6	3.3	46.2
Rural	38.6	5.7	34.5

Source- IIPS and Macro International. 2007.

The vaccination of girls is much lower than boys. Vaccination in rural areas is lower than urban areas. In urban area there are only 3.3 % children who have got no vaccination at all, and in rural area 5.7 children have got no vaccination at all (Table - 2.9).

Figure-2.21: Full Immunization Coverage by State

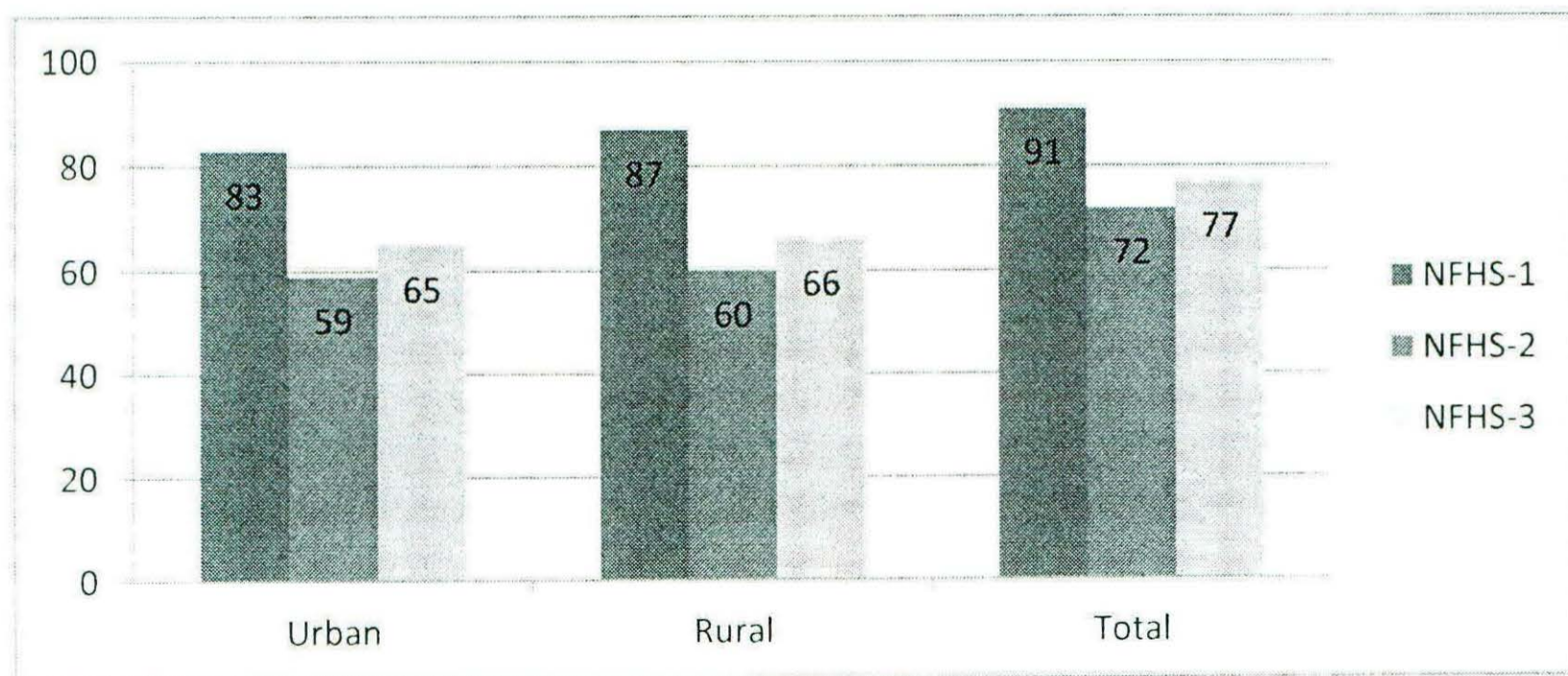


Source- IIPS and Macro International. 2007

A state wise comparison suggests that Delhi is better than other states and India average in overall vaccination. But there are many states like Tamil Nadu, Kerala, Sikkim, Haryana and West Bengal which have better coverage than Delhi (Figure 2.21).

Maternal health services are also very important indicator of access.

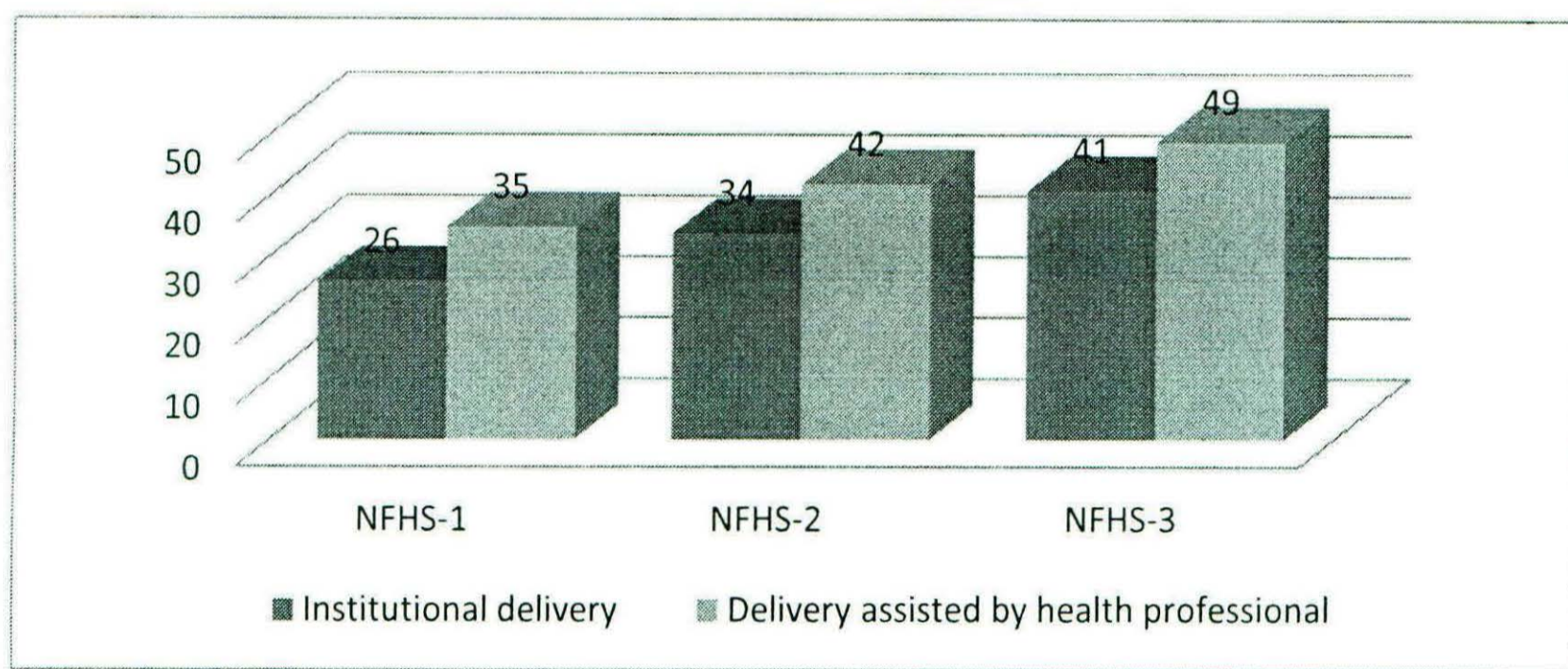
Figure-2.22: Percentage who received any antenatal care in India by residence



Source- IIPS and Macro International (2009)

As per NFHS -3 (91 percent) pregnant women received any form of antenatal care in urban areas. Compared to this in rural area 72 percent women received any form of antenatal care. These maternal health services, we can find that only 41% women had institutional delivery in NFHS 3. It was very low for NFHS 1 (26%) but has improved. But still overall it is very low. Similarly only about half the women (49%) had delivery assisted by health professional during NFHS 3 (IIPS and Macro International, 2009) (Figure 2.23).

Figure-2.23 Place of Delivery and Delivery Assisted by health professional in India during NFHS-1, 2,3



Source- IIPS and Macro International, 2007.

Table: 2.10: Place of delivery and Assistance during delivery in India by residence –NFHS-3

Place of delivery by residence								
	Health facility/institution			Home				Percentage delivered in a health facility
	Public Sector	NGO/trust	Private sector	Own home	Parents 'home	Other Home	Others	
Urban	28.6	0.9	37.9	26.6	5.3	0.4	0.2	67.5
Rural	14.4	0.3	14.2	59.8	10.6	0.5	0.3	28.9
Assistance during delivery in India by Place of Residence								
	Doctor	ANM/nurse/midwife/LHV	Other health personal	Dai (TBA)	Friends/Relatives	Other	No one	Percentage delivered by a skilled provider
	Urban	61.8	11.2	0.4	20.0	6.0	0.1	0.3
Rural	26.1	10.0	1.3	42.1	19.6	0.1	0.6	37.5

Source- IIPS and Macro International, 2007.

Percentage of delivery in health facility in urban areas is better than rural areas. In urban areas 67.5 percent women deliver in facility. In rural area only 28.9 percent women deliver in facility. Place of delivery in urban areas is highest in private sector (37.9 percent). In rural areas 59.8 percent deliver in own home. In urban areas assistance during delivery is provided mostly by doctors (61.8 percent) whereas in rural areas assistance during delivery is provided mostly by dai (TBA) (42.1percent). Percentage of skilled assistance during delivery in urban areas is better than rural areas. In urban areas 73.5 percent women had delivery by skilled provider. In rural areas only 37.5 percent women had delivery in by skilled provider (Table- 2.10).

In India level data also we can see that there is a lot of difference in urban and rural areas in maternal care indicators. 68.34 percent receive ANC in India, out of this 81.90 percent are in urban areas and 54.78 percent are in rural area. 48.15 percent women in India delivered in health facility, out of which 67.4 percent were in urban area and 28.9 percent women were in rural area. Only 28.9 percent women in rural areas had deliveries assisted by health personnel (Table-2.11).

Table: 2.11: Maternal care indicators in Delhi

Maternal care indicators	India			Delhi		
	Urban	Rural	Total	Urban	Rural	Total
Percentage who received selected antenatal services*	81.90	54.78	68.34	86.58	76.72	81.6
Percentage of births delivered in a health facility	67.4	28.9	48.15	60.1	47.0	58.9
Percentage of deliveries assisted by health personnel Doctor/ ANM/nurse/midwife/LHV	73.5	37.5	55.5	64.1	63.0	63.5
Percentage of deliveries with a postnatal check-up	65.7	33.9	49.8	61.4	54.5	57.9

Note:- * Weighed, Blood pressure measured, Urine sample taken, Blood sample taken and Abdomen examined

Source- IIPS and Macro International, (2009).

Delhi has good coverage of ante natal care services. Urban areas have better access than poorer areas as 81.6 percent pregnant women reported getting select ANC. Only 58.9 percent women gave birth in a health facility, out of which 60 percent were in urban area and 47 percent were in rural area; 63.5 percent women were assisted by

trained health personnel during their delivery and 57.9 percent women got post natal checkup (Table-2.12).

Table-2.12: Distribution of population reporting illness by treatment place in slums of Delhi

Private doctor	Medicine from chemist shop	Private OPD	Government dispensary/hospital	Grand total
9.8	4.1	18.7	67.4	100.0

Source: Source: CGDR, pp 25.

One study done in slums in different zones of Delhi found that for seeking healthcare largest number (67.4 percent) went to a government health facility followed by private OPD (18.7 percent), private doctor (9.8 percent) and chemist shop (4.1 percent) (CGDR, 2011) (Table-2.12).

II.4.2 Reason for not seeking health care

NSS provides several reasons for untreated ailments. In 42nd, 52nd and 60th rounds the biggest reason for untreated ailments is that the ailment is not considered serious. However the percentage has gone down from the 42nd round to 60th round. In the 60th round 32 percent in rural areas and 50 percent in urban areas did not seek treatment because they thought their ailment was not serious. But financial problem as a reason for not seeking treatment has increased in both urban and rural areas. Other reasons for not seeking treatment have also increased from 42nd to 60th Round (Table-2.13). The increase in “others” reason could mean that there is an increasing trend towards getting treatment informally either from family members, or from the untreated and unregistered informal sectors (Mukherjee and Karmakar, 2008).

Table-2.13: Percentage distribution of untreated ailments by reason for not taking treatment in India - NSS 42nd 52nd and 60th Rounds

Reasons for not taking treatment	Rural			Urban		
	42 nd	52 nd	60 th	42 nd	52 nd	60 th
No medical facility	3	9	12	0	1	1
Lack of faith	2	4	3	2	5	2
Long waiting	0	1	1	1	1	2
Financial problems	15	24	28	10	21	20
Ailment not serious	75	52	32	81	60	50
Other	5	10	24	6	12	25
Total	100	100	100	100	100	100

Estimated for others include the cases where the reason is not reported.

For 42nd and 52nd rounds estimates refer untreated person.

Source- Mukherjee and Karmakar (2008)

Table-2.14: Reason for not seeking Medical Treatment by Expenditure Quintile
(Urban India)

Expenditure Quintile	Reason for not seeking Medical Treatment						Total
	No medical facility	Lack of faith	Long waiting	Financial Reason	Ailment Not serious	Others	
Poorest	0.30 (3.06)*	0.21 (2.17)	0.07 (0.67)	4.39 (45.11)	3.20 (32.89)	1.57 (16.10)	9.74 (100.00)
Poor	0.07 (0.59)	0.12 (1.04)	0.03 (0.23)	3.02 (26.99)	5.55 (49.58)	2.41 (21.58)	11.19 (100.00)
Middle	0.10 (0.79)	0.50 (3.75)	0.48 (3.58)	4.94 (37.08)	5.15 (38.60)	2.16 (16.21)	13.33 (100.00)
Richer	0.00 (0.00)	0.30 (1.23)	0.50 (2.08)	5.05 (20.97)	12.25 (50.91)	5.97 (24.81)	24.06 (100.00)
Richest	0.73 (1.74)	0.76 (1.82)	0.58 (1.38)	3.14 (7.53)	24.13 (57.91)	12.34 (29.61)	41.68 (100.00)
Total	1.19	1.88	1.64	20.54	50.28	24.45	100.00

Note:- * The values with brackets' are proportions within each expenditure quintiles.

Source: NSS 60th round in Mukherjee and Karmakar (2008).

Among the poorest in urban areas financial reason (45.11 percent) is the most important reason for not seeking medical treatment followed by ailment not being consider serious (32.89 percent). Among the richest Quintile in urban area only 7.53 percent do not seek treatment due to financial reason. Aliments not being consider serious (57.91 percent) is the biggest reason. In all other quintile ailments not serious is the biggest reason. However financial reason is also important reason for not seeking treatment (Table -2.14).

Different studies done in slums of different cities in India show that there are many reasons for not seeking care. There can be both demand side barriers and supply side barriers. Demand-side barriers are factors that reduce patients' ability to use health services. These include factors like lack of transport, asymmetric control over household resources, direct and indirect health-related costs, perceived seriousness of the illness, health literacy, and socio-cultural and psychological factors (Ensor and Cooper, 2004; O'Donnell, 2007 cited in Michielsen et al. 2011). Other authors promoted the integration of more abstract social and psychological constructs as wealth, gender, discrimination, trust, self-esteem and stigma into the framework (Jacobs et al, 2011, cited in Michielsen et al, 2011). Supply-side factors are those which are inherent to the health system and because of which people do not go to seek services. These generally include availability of proper medical infrastructure,

equipment, medicines and staff, cost and price of the services and medicine, service location, education of the staff, knowledge of technology of treatments, service organization, waiting time, provider responsiveness and quality and management efficiency. A study in Indore similarly found that there were two broad reasons for not seeking treatment- condition within household and condition with respect to the health care providers. The former includes financial situation of the day, which family members is unwell nature of the health problems/need, trust and faith in specific provider, traditional pattern of care and the latter includes distance, costs: consultation fee, cost of medicine and cost of transport, ability to get relief from the ailments, response the attitude. The study shows that slum dwellers prefer to go to informal providers because it is easier to talk to them because they are friendly compared to government doctors. They can also make payment later to informal providers (Islam et al, 2006).

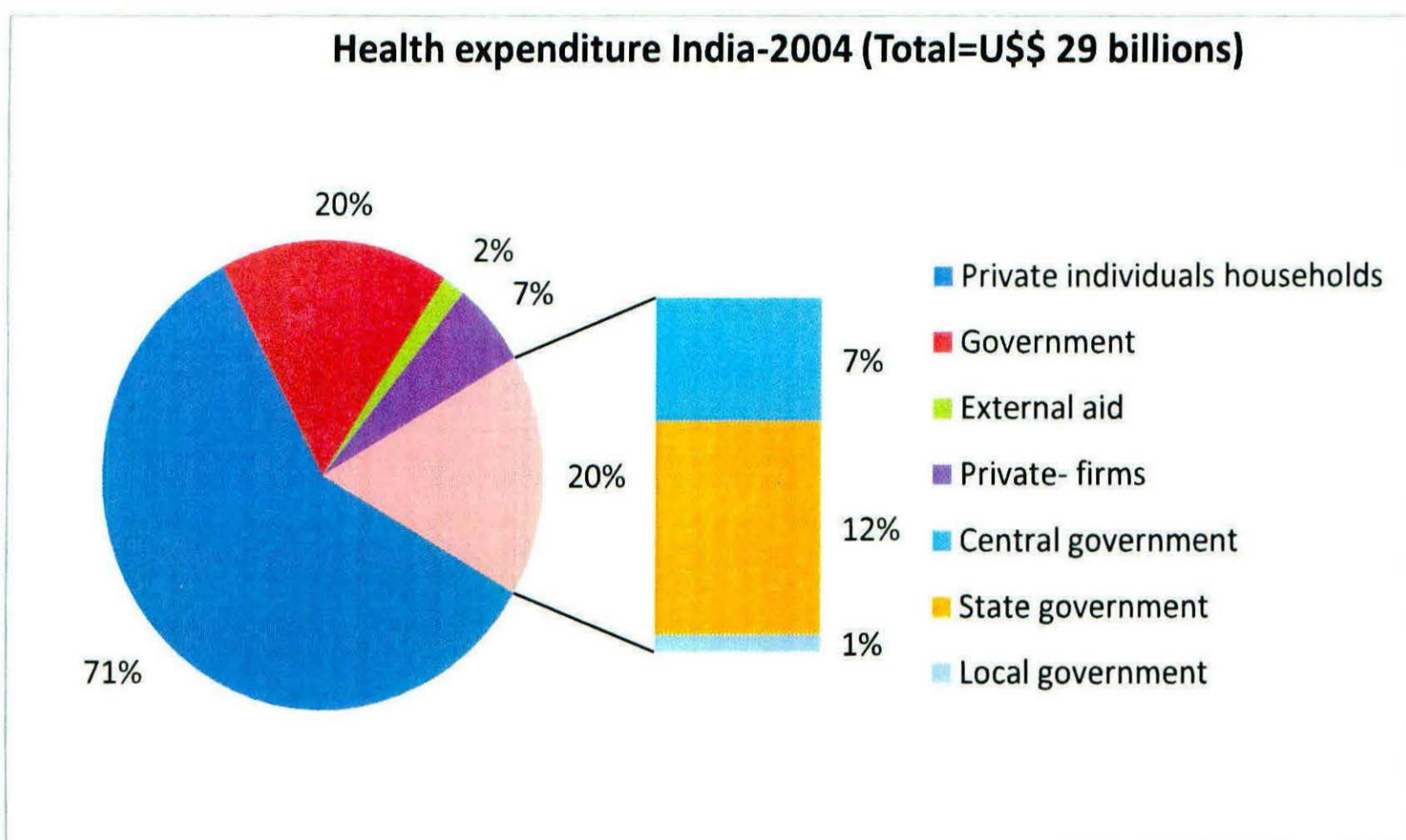
Women face more barriers than men in seeking care. A study done in Mumbai slum to see reasons for not seeking care during pregnancy found that in addition to the reasons in NSS women do not seek care because their family did not allowed, there was no one to look after children and there was no one to accompany them (More et al, 2010). Another study done in slum of Rajkot city of Gujarat to find factors affecting care seeking for reproductive morbidities among women found that 66 percent women in the sample went untreated. Socioeconomic conditions, caste, distance from health facilities, and duration of illnesses were the factors that determined care seeking among women (Bhandari and Kannan, 2010).

There are some government schemes like Rashtriya Swasthya Bima Yojna in which BPL persons get a smart card and can get cashless treatment. One study found that only 5.03 percent of the slum households reported possession of Smart card and only 10 percent were aware about the scheme (CGDR, 2011).

II.4.3 –Out of pocket health expenditure

India has one of the highest out of pocket expenditure for health care in the world. About 71 percent expenditure on health is out of pocket. The government's share is only 20 percent (Figure, 2.24).

Figure-2.24: Health Expenditure in India (2004) by Source of Financing

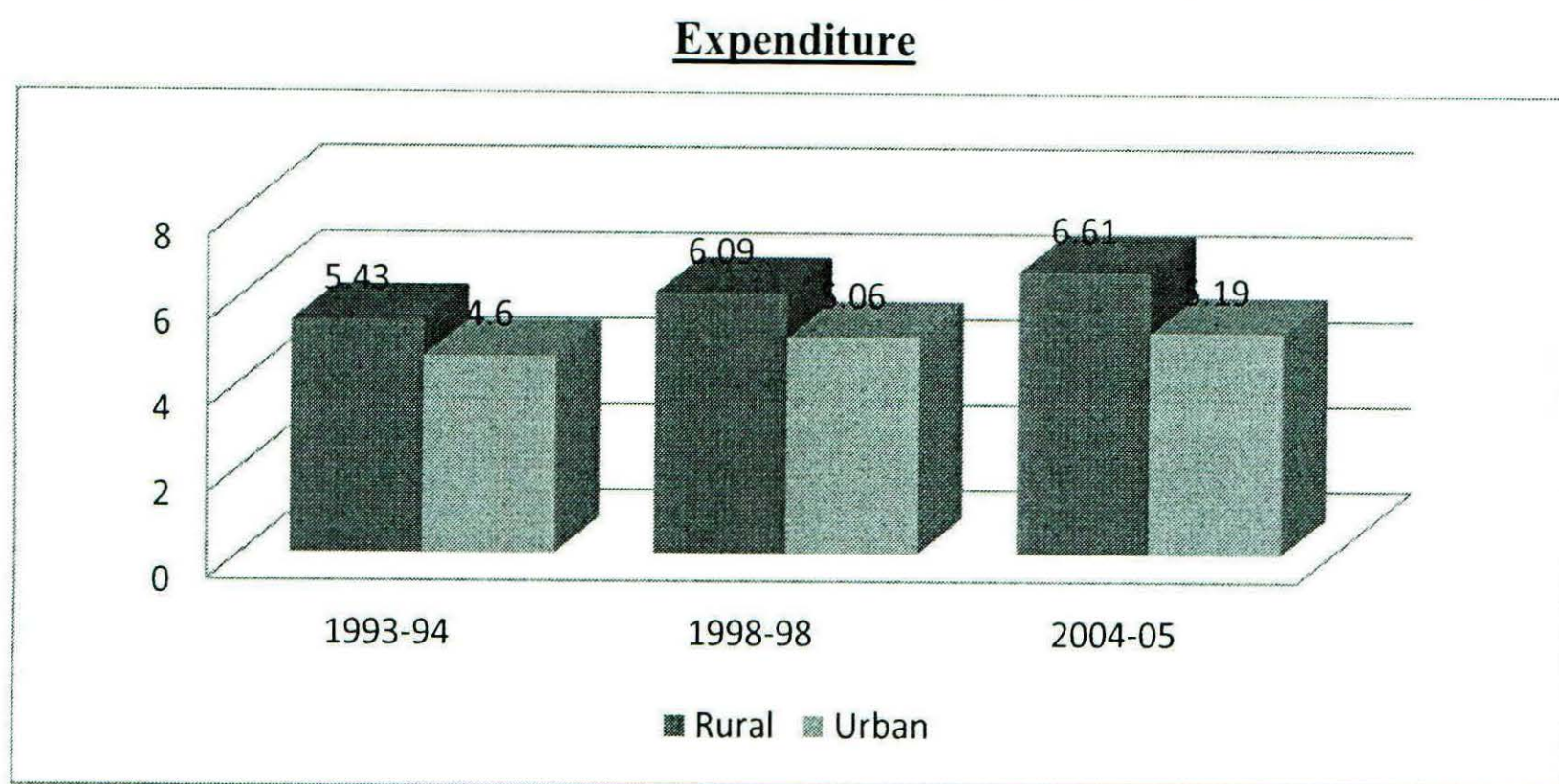


Source- National Health Accounts (2009)

Expenditure on health has been growing. Though the spending on healthcare is 6% of gross domestic product (GDP), the state expenditure is only 0.9% of the total spending. Some studies found that during 1999-2000 approximately 32- 37 million people in India were pushed below poverty line due to high OOP payments (Selvraj and Karan, 2009).

It is found that health expenditure is higher in the rural than in the urban population. As per 2004-05 NSSO Consumption Survey data, 6.6% of household consumption expenditure was spent on health in rural and 5.2% in urban areas. (Baru et al, 2010). This can be because people living in towns and cities have better access to public and private services compared with those in rural areas. There has been an increase in household consumption expenditure on health in both rural and urban areas between 50th and 60th rounds. In urban areas in 50th round consumption expenditure on health was 4.6% of total consumption expenditure. In 60th round it increased to 5.19 percent. In rural areas it was 5.43 percent in 50th round and it increased to 6.61 percent in 60th round (Figure-2.25).

Figure-2.25: Health Spending as Percentage of Household Consumption



Source-NSSO survey of consumption expenditure 50th and 60th round Cited in Baru et al, (2010), pp 53.

As regards burden of direct health expenditure on the household for outpatient and inpatient treatment in urban and rural areas, in rural areas outpatient health expenditure is higher than inpatient care health expenditure. The poorest have the highest percentage of expenditure on health. For next seven classes it declines to 25 percent.

In urban areas poorest have the highest percent of expenditure on health on outpatient at around 30 percent. The highest class spends around 15 to 16 percent in outpatient care. The richest people spend more on inpatient care possibly because they can afford private and corporate hospitals (Baru et al, 2010).

Table-2.15: Average Cost (Rs) of per Hospitalization from Government and Private Sources at Constant 1986-87 Prices in Different Years

Source/year	Rural	Urban	Combined
Government			
1986-87	585	580	585
1995-96	863	975	910
2004	1,108	1,063	1,066
Private			
1986-87	1,055	1,678	1,147
1995-96	1,786	2,374	2,002
2004	2,320	3,240	2,583

Price deflators used for rural and urban areas are consumer price indices for agriculture labour (CPI-AL) and non- manual workers (CPI-NM), respectively.

Source- Selvraj and Karan, 2009, pp.58.

The cost of treatment has also increased over time. This is also causing burden of out of pocket expenditure. Table 2.15 shows that the cost of treatment has increased both in public and private sectors. But private sector hospitalization cost has increased much more (more than 100 percent) between 1986 -2004 (Selvraj and Karan, 2009).

There has been an increase in the number of poor due to out of pocket payments from 1993- 94 to 2004-05. As per 2004 estimates approximately 13 percent (12 percent in urban and 14 percent in rural) of household spend 10 percent or more of their expenditure on health care. (Baru et, al, 2010). A study done among urban poor of Delhi slum to examine medical poverty trap was done in Coolie Camp and Kusumpur Pahari. It was found that the average cost of treatment as outpatient was Rs 651 in Kusumpur Pahari. It was found that person with accident and injury incurred the highest average expenditure followed by Tuberculosis and diseases of the nerves system. More than 39 percent of the household spent more than 15 percent of their income on health care. The share of health expenditure in household budget was highest for people who chose treatment from registered private providers (Chowdhury, 2009).

Cost of treatment can be in the form of doctor's consultation fee, hospitalization, and cost of medicine and also cost of transport and loss of wages. Poor in the slum have erratic income, no savings and no support from banks for treatment costs. For many families there is no social support as most families are nuclear families. Therefore due to lack of financial resources poor are forced to borrow from local money lenders at high rates of interest. About 14.4% of slum households incurred debt on account of illness (N IUA, 2001).

II.5 Conclusion

There has been increase in urbanization in the world including India. Big cities like Delhi have seen large migration because of many push and pull factors. Due to lack of affordable housing, it has led to increase in slums in these cities and increase in urban poverty. The poor living condition in slums, overcrowding, lack of sanitation and proper housing all lead to high morbidity among slum dwellers. They also have to bear many social, economic and legal uncertainties. They do not have well paying jobs, have no security of tenure and face a lot of stress. These can be linked to poor

hygiene and living conditions in slums. Access to healthcare is also very poor in India and especially in slum areas. Coverage of immunization, ANC, skilled assistance during delivery and post natal care is not very good. This also affects health. Poor health and morbidity leads to high out of pocket expenditure for the poor. Persons living in slums therefore have to live with many problems and their health is affected by these problems.

Chapter 3

Kusumpur Pahari: Demographic profile

CHAPTER-III

KUSUMPUR PAHARI: DEMOGRAPHIC PROFILE

III.1 The study area

Kumsumpur Pahari is an urban slum area which has approximately 20,000 populations housed in 2500 households, unhealthy environment with inadequate infrastructure lacks in proper sanitation and drinking water facilities. It is located behind CBI colony in Vasant Vihar. This slum is spread over 22.5 acres land. Settlement in Kushumpur Pahari started around 1970s. Main reasons of initial settlements were economic activities, mostly quarrying work in the Pahari¹

The construction workers who were quarrying engaged in quarrying activities settled Kushumpur Pahari, their male relatives from their villages came subsequently with them for jobs. Other workers in Delhi came through the acquaintance of the initial residents. Generally families started joining the male migrants. Inhabitants of the area mainly belong to the Scheduled castes¹.

Kushumpur Pahari got recognised as a slum settlement in 1983. When every household in slum was enumerated and issued 'V. P. Singh Tokens' in 1990 ensuring rights as a permanent Delhi residents, formalizing their right to resettlement in case their slum was removed. At that time 2500 households were identified in this area. Ration cards, identity cards and voter cards, V. P. Singh Tokens were given to its residents (Ghertner, 2010).

In 1990 MCD divided Kushumpur Pahari slum into 5 blocks of around 500 households each. These blocks have now grown to around 2000-2500 households. Electricity, and water via tube well, bore well water and tanker water is made available to them. Each block is predominantly populated by migrants from UP and Haryana: Block B- has migrants from UP, Bihar and Tamil Nadu, Block C- from Rajasthan and UP, Block D-has mixed population and Block F- mostly from Rajasthan. This slum has migrant from UP, Rajasthan, Bihar and Tamil Nadu. Most of them are from UP followed by Rajasthan, Bihar and Tamil Nadu. There are 50%

¹ Based on field work done as part of the course SM 642 (Urbanization and Public Health in India) during February 2010.

SC households in Kumsumpur Pahari. Block A and D mostly has SC households. There are infrastructures problems related to water, sanitation and toilet facilities². Some of the observations are as follows.

Kumsumpur Pahari slum started as unauthorized settlements (jhuggi jhopri ,JJ) cluster, lacking even the basic amenities. Later plots of 25 Sq yards were provided to each JJ slum dweller. The Delhi Development Authority (DDA) was formed in 1957 to promote and secure development of Delhi including slum. The DDA addressed slum in 1990. The situation of slum before and after 1990 is presented in table 3.1.

Table-3.1: Housing Pattern in Kusumpur Pahari

<u>Housing</u>	<u>Pre-1990</u>	<u>Post-1990</u>
Lots transaction	Through contracts without any paper works	Mutual exchange with the owners but without any paper works
Price	Upto Rs-50/-	Upto Rs-3000/5000/-
Size	10'x10' to 12'x15'	6'x6'to 8'x8'
Design (building material)	Semi-permanent dilapidated structure	Permanent dilapidated structure
Rental charge	uptoRs-1200 for-3 rooms per month	upto Rs-700-800 for residential upto Rs-1800-2000 for commercial and one rooms
Toilet facilities	20% of the houses have the facilities	

III.1.1Socio- Demographic Profile

There are 2500 households in the slum. The average household size is eight and the population is 20,000. Based on my field work data, about 54 % were male and 46 % female. The age, sex, composition of the population of Kusumpur Pahari suggest that most people are in the age group of 15to 25 years, followed by 5-15 years. This is true for both male and female. (Table- 3.2)

² Based on field work done as part of the course SM 642 (Urbanization and Public Health in India) during February 2010.

Table 3.2: Age group by Sex

Age group	Sex		
	Male	Female	Total
Less than 1	9	7	16
1 to 5	69	56	125
5 to 15	149	129	278
15 to 25	162	146	308
25 to 35	100	86	186
35 to 45	72	68	140
45 to 55	36	25	61
55 to 65	17	14	31
65 and above	10	3	13
Total	624	534	1158

III.1.2 Social Facilities and Civic Amenities'

Health Facilities

There is no Government health facility like dispensary. A Health dispensary is being run under the charitable trust which provides free services like immunization, growth monitoring and ANC checkups. Private practitioners are running clinics and do not have recognized medical degree. Public health –services like fumigation are not being done on a regular basis and being done on request. Cases of diarrhoea, common gastro Intestinal ailments are prevalent in the area, because of insufficient water supply. Many of the serious cases are being referred to Safdarjung hospital and private hospitals situated at a distance.

Sanitation

Poor sanitary condition is also observed in the slum. Almost 80% of water supply passes through the sewerage, sullage or other effluents. Inadequate drainage system creates pools of stagnant water which breeds mosquitoes and flies. Piled up, untreated garbage is left to decompose. For urinating and defecation, people go to the adjoining open lands- 'maidans'. Only two sulabh shauchalyas are functional. There are open drains outside houses. Places around the hand pumps are unclean and unhygienic, no measures are taken for water quality checks and there is no provision for treating water.

Drainage

All the drainages are open. They are three sizes; 6 inches by 1 foot, 1 ½ feet by 1 ½ feet and 3 ½ feet by 3 ½ feet. Though they are planned properly, but do not function properly, there is improper cleaning and as a result blockage occurs. It is connected to the main sewerage of Air India Colony. Over flowing drain cause ponds of stagnant

water. There are two such ponds- One is the eastern part end and the other in Southern part-connected to sewer.

Solid wastes

Eventhough, there are selected dustbins and collection point which are rarely used, the garbage is disposed in open. No proper cleaning. The practice of collection and disposal are unhealthy. Disposal and solid waste practices need more participation and involvement of local people.

Community latrine

The slum has two community latrine complexes in Block-D and another in Block E. There are 60 latrines for male and female. There are 14 bathrooms for male and female. They are managed by Mahatma Jyotiba Phule Sansthan and charge Rs- 1 per use of latrine and Rs- 2 per bathing and washing one pair of cloths. Monthly charges are Rs-500/ for washing clothes. There are illegal practices of water selling. Community toilets need to be public friendly and in every block.

Water supply

There are 3 hand pumps, 3-4 motor driven boring wells and one water tanker comes every day from Delhi Jal Board (DJB). Water from the tankers is used for drinking and from tube well/hand pump is utilized for washing/bathing (secondary purpose). Water supply in the area is not sufficient and it needs proper planning.

There is no water supply in resident's houses, and no one ever knows when the DJB tanker will come – it can come once in two days, once in three days and sometimes even once in a week.

When the tanker comes: it became a riot like situation. One woman told me - "*Paani ke maamle mein, koi kissi ka dost nahin hai*", another woman said – "*Agar koi mar bhi jaaye aur uski body ghar ke baahar padi ho aur tanker aa gaya, toh koi nahin dekhega ki kaun ro raha hai, aur kaun mara pada hua hai, sab bas tanker ki taraf bhaagengey*". The water they get from the DJB tanker is the water they have to use for everything – drinking, washing clothes, utensils, cooking, bathing and going to the toilet (Shahana Sheikh,2008).

Education Facilities

Children in the area attend one Sarvodaya Government senior secondary school situated in the outskirts and there is a MCD primary school. There are also non formal educational centers being run by Ramakrishna Mission and they provide free

nutritional supplementary meals to children like eggs and milk daily. There is a library under charitable trust but is closed most of the time.

Electricity supply

Source of electricity supply in the slum is BSES Rajdhani Power limited. Charges are Rs-2.45 per unit and subsidy of Rs-1/unit is given to the slum residents. There are two transformers and regular maintenance is being done. Safety is good. Electric pole is at about 70 feet. Street lights are present in selected points. Electricity supply is good.

Roads & Transport

Slum is connected to Vasant Vihar with concrete road. Entry point of the slum is clean, wide- approximately 12 feet road. Main road is spacious and occupied by the well established group. Main branch road is 8 feet. Further branching is from 6 feet to 3 feet width. Road is being congested due to water canes, coolers and other private accessories.

Road is quite well linked to the adjoining settlements and connected with the town and is maintained by public transport mode like buses. Internal connectivity is maintained through privately owned vehicles.

Other Services

Other services available are - Anganwadi Centers (Fresh meals provided to preschoolers daily like halwa cholle, khichri, daliya, milk etc), Crèche for preschoolers (Play way activities do exist for the children of women working as wage laborers), There is also Public Distribution System Centers for distribution of dry cereals like wheat, rice at subsidized rates at Rs 3 for wheat, Rs 6 for rice and kerosene oil. It is open for one day only in a week. Public entertainment facilities include open spaces and parks (large maidens) maintained by MCD, used by children for playing and as recreational area by residents.

III.2 Socio-demographic profile of study Population

This section describes the socio-demographic profile of the respondents in terms of age, sex, caste, and the native place from where they came to Kusumpur Pahari.

A total of 200 respondents were interviewed who gave information about their family members as well as about themselves. Therefore information was collected for a total of 1158 individual's .Out of these 46 % was female and 54 % was male (Table-3.3).

Table 3.3: Sex wise distribution of the individuals and households

Sex	No of households	% of households	No of individuals	% of individuals
Male	88	44.0	624	53.9
Female	112	56.0	534	46.1
Total	200	100.0	1158	100.0

There were 44 % male respondents and 56 % female respondents in 200 households which were surveyed to draw field data.

Most of the individuals about whom information was collected were below 45 years of age. Only about 9 % of the individuals were those whose age was 45 years or above. Children below age of five make almost 12 % of total individuals. About one forth (24.7%) were aged less than 10 years. More than 33% are aged between 25-55 years. This reflects on the age selective migration of young people who can actively engage in work and earn livelihood (Table-3.4).

Table 3.4: Age Structure of Study Population

Age group level	Numbers of individuals	%age of individuals
Less than 5 years	141	12.2
5 to 10 years	144	12.4
10 to 15 years	134	11.6
15 to 20 years	185	16.0
20 to 25 years	123	10.6
25 to 35 years	186	16.1
35 to 45 years	141	12.2
45 to 55years	60	5.2
55 to 65 years	32	2.8
65 to above	12	1.0
Total	1158	100.0

As regard religion, all but one respondent were Hindus. This one household followed Christianity. There was only one Muslim family in Kusumpur pahari, which was not a part of the study sample.

The disaggregation of study population by social groups suggests that 85.1 % were SC, 13.4 % were OBC and only one % belonged to higher caste. The total population in Kusumpur Pahari also reflects that most are Schedule castes. Therefore, the data appears to capture this aspect of the population studied (Table- 3.5).

Table 3.5: Caste in households

Social Group	No of Households	% of Households
SC	171	85.1
OBC	27	13.4
Gen	2	1.0
Total	200	99.5

Among SC respondents there were more males than females and among OBC respondents there were slightly more females than males. 47.5 % respondents are SC male, 39.6 % respondents are SC female, 6.1 % respondents are OBC female and 5.9 % respondents are OBC male. Only 5 % respondents are high caste male and 4 % are high caste female belonged to the two household (Table-3.6).

Table 3.6: Distribution of Households by Social Group and Sex

Social Group	No of Households	% of Households	Total Males	Total Females	Total
SC	171	85.1	550(47.5%)	458(39.6%)	1008(87.0%)
OBC	27	13.4	68(5.9%)	71(6.1%)	139(12.0%)
General	2	1.0	6(.5%)	5(.4%)	11(.9%)
Total	200	99.5	624(53.9%)	534(46.1%)	1158(100%)

A large % 57.5% of individuals were unmarried. Among the married, most of the individuals were married at the age of 18 years or above. 13.6 % of the individuals were married at the age of 22 years and above. 16 % of the individuals were married at the age of below 18 years. 4.5 % were married between 18 to 20 years and 7.4 % of individuals were married between 20 to 22 years (Table-3.7).

Table 3.7: Age at marriage in individuals

Age at marriage of individuals	No of individuals	% of individuals
unmarried person	666	57.5
Less than 12	46	4.0
12 to 18	150	13.0
18 to 20	52	4.5
20 to 22	86	7.4
22 to above	158	13.6
Total	1158	100.0

(Table-3.7) Note*-Out of 46 individuals who were married at less than 12 years, 6 were married at less than 6 years of age.

Most respondents reported age at the time of marriage is above 22 years (13.6 %) followed by 12 to 18 years (13 %). There were 40 respondents (3.5 %) who were married between age of 6-12 years and 6 respondents reported age at the time of marriage as below 6 years. Most of the respondents 40 out of 46, who got married below the age of 12 years, were SC. It is appalling to note that there are still children < 6 years who have been married off. What is of concern is that they belong to Scheduled Castes. This reflects that this norm which has been widely criticized continues to be a part of the communities which are underprivileged and at lower level of socio-economic ladder. Lack of opportunities for them makes the situation bad (Table-3.8).

Table 3.8: Caste by age at marriage

Age at marriage	Caste			
	SC	OBC	General	Total
Unmarried	585(50.5%)	75(6.5%)	6(.5%)	666(57.5%)
Less than 6	6(.5%)	0(.0%)	0(.0%)	6(.5%)
6 to 12	34(2.9%)	6(.5%)	0(.0%)	40(3.5%)
12 to 18	126(10.9%)	22(1.9%)	2(.2%)	150(13.0%)
18 to 20	45(3.9%)	7(.6%)	0(.0%)	52(4.5%)
20 to 22	75(6.5%)	10(.9%)	1(.1%)	86(7.4%)
22+ (above)	137(11.8%)	19(1.6%)	2(.2%)	158(13.6%)
Total	1008(87.0%)	139(12.0%)	11(.9%)	1158(100.0%)

For most respondents reason for coming to Kusumpur Pahari was employment. Both among SC and OBC respondents employment was the main reason for coming to Kusumpur Pahari followed by marriage among SC population (Table-3.9).

Table 3.9: Reason for coming to Kusumpur Pahari by Caste

Caste	Reasons for coming to Kusumpur Pahari				Total
	Employment	Marriage	Treatment	Relative (seeking work)	
SC	119	44	1	7	171
OBC	18	7	2	0	27
GENERAL	2	0	0	0	2
Total	139	51	3	7	200

About 49.5% of the respondents were illiterate. 11.5% of the respondents were primary level educated. 33 % of the respondents were educated upto middle school.

4% of the respondents were educated upto intermediate level. 1 % of the respondents had Graduation and 1% of the respondents had Post Graduate.

Most of the individuals were literate. 38.4 % of individuals were illiterate. Among those who were literate only 7.8 % have education above middle school, with only about 2 % individuals with bachelors degree and above. Although almost half the respondents were illiterate, larger number of women (54.6 %) was illiterate in comparison to men (43.8 %). One male was a Graduate and one female was Post Graduate.

In all, out of 444 individuals who were illiterate, 187 are male and 257 are female. Most female are educated up to middle school. 115 females have got primary education, where as 141 males have primary education; 137 females have completed middle school while 230 males have completed middle school; only 19 females have studied upto intermediate level compared to 49 males, and 6 females are graduate compared to 17 males (Table-3.10).

Table 3.10: Education by individuals and respondents level

Education level	No of households	Male Respondents	Female Respondents	% of household	No of Individuals	% of Individuals
Illiterate	99	187	257	49.5	444	38.4
Primary	23	141	115	11.5	256	22.1
Middle	66	230	137	33.0	367	31.7
Intermediate	8	49	19	4.0	68	5.9
Graduation and above	4	17	6	2.0	23	1.9
Total	200	624	534	100.0	1158	100.0

Note*- out of 4 households who have Graduation and above qualification, 2 had Post Graduate (Table-3.10).

Note*- out of 23 individuals who have Graduation and above, 5 had Post Graduate.

Most of the migrants from U.P, Rajasthan and Bihar are illiterate. But most migrants from Haryana and Tamil Nadu are middle school educated (Table-3.11).

Table 3.11: Place of origin of respondents by Education level

Education level	Place of origin of the respondents					Total
	U.P	Rajasthan	Bihar	Haryana	Tamil Nadu	
Illiterate	47	29	19	2	2	99
Primary	3	12	5	2	1	23
Middle	24	18	13	6	5	66
Intermediate	4	1	2	1	0	8
Graduation	2	0	0	0	0	2
Post Graduate	0	0	1	1	0	2
Total	80	60	40	12	8	200

In Kusumpur Pahari residents have migrated from different states. Most of them have migrated from U.P followed by Rajasthan and Bihar. Table 3.10 shows that large number of respondents from UP are illiterate followed by Rajasthan. 23% from all states are just primary educated and 66 are middle school educated.

As regards the respondents from the household they too have migrated from different states of India. Most of them (40%) have migrated from U.P, followed by Rajasthan (30 %), Bihar (20 %), Haryana (6 %) and Tamil Nadu (4 %) (Table-3.12).

Table 3.12: Native status by individuals and households

Native status	No of households	% of households	No of individuals	% of individuals
U. P	80	40.0	507	43.8
Rajasthan	60	30.0	343	29.6
Bihar	40	20.0	199	17.2
Haryana	12	6.0	76	6.6
Tamil Nadu	8	4.0	33	2.8
Total	200	100.0	1158	100.0

Out of individuals 42.5 % married and the rest were unmarried (Table-3.13).

Table 3.13: Marital Status by individuals

Marital status	No of individuals	% of individuals
Married	492	42.5
Unmarried	666	57.5
Total	1158	100.0

III.3 Economic profile in Kusumpur Pahari

This section describes the occupational profile of respondents and their income. This table shows the occupation that was reported by the respondent who was interviewed. These include both men and women. Almost all respondents belong to unorganized sector. Out of total 332 workers 181 were unskilled. Total of 15.7 % individuals were unskilled, about 7 % semi skilled, about 3 % were skilled and only one worker was highly skilled (Table-3.14).

Unskilled include construction workers, domestic help; semi skilled include carpenter, gardener, peon, painter, contractor; skilled include electrician, Anganwadi workers, driver, phone mechanic, tailor; Highly Skilled includes Teacher; Self Owned Business includes grocery shop owners, and room owners who get rent.

Table 3.14 Occupation of the individuals

Occupation	No of individuals	%age of individuals
Non workers	826	71.4
Unskilled	181	15.7
Semi skilled	80	7.0
Skilled	34	3.0
Highly Skilled	1	0.1
Self owned business (shop owners)	29	2.8
Total	1158	100

71.3 % of the individuals about whom information was collected were non earning members. Majority of the earning members had an income of less than Rs 5000 per month. 8.2 % of individuals had income between 5000 to 10000 per month. Only 7 individuals (.6 %) had income of Rs 10000 and above (Table- 3.15).

Table 3.15: Income per month by individual level

Income per month	No of individuals	%age of individuals
Non earning persons	826	71.3
Less than 5000	230	19.9
5000 to 10000	95	8.2
10000 and above	7	.6
Total	1158	100.0

Note*- In the 10,000 and above category, 5 individuals earn between 10-15 thousand rupees, one individual has income varying between 15000 to 20000 and one individuals has income of 30000 (Table-3.15).

Table 3.16 gives the education wise income. Large %age of respondents is illiterate so less chances of earning well. Thus 28% earn less than Rs. 5000 and 17 % less than 10000.

Table 3.16: Monthly Incomes by Education

Education level	Monthly Income						Total
	Less than 5000	5000 to 10000	10000 to 15000	15000 to 20000	20000 to 25000	25000 and above	
Illiterate	325(28.1%)	198(17.1%)	240(20.7%)	49(4.2%)	12(1.0%)	3(.3%)	827(71.4%)
Primary	82(7.1%)	45(3.9%)	89(7.7%)	11(.9%)	2(.2%)	1(.1%)	230(19.9%)
Middle	35(3.0%)	13(1.1%)	36(3.1%)	7(.6%)	4(.3%)	0(.0%)	95(8.2%)
Intermediate	2(.2%)	0(.0%)	0(.0%)	1(.1%)	0(.0%)	1(.1%)	4(.3%)
Graduation	2(.2%)	0(.0%)	1(.1%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
Post Graduate	0(.0%)	0(.0%)	1(.1%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
Total	444(38.3%)	252(22.1%)	367(31.7%)	68(5.9%)	18(1.6%)	5(.4%)	1158(100.0%)

In Kusumpur Pahari 91.1 % respondents reported living in houses owned by them. 8.9 % lives in rented houses. 6.5 % respondents who lives in rented house earns less than Rs. 5000 a month, 1.5 % living in rented houses earns between 5000 to 10000 in a month, 0.9% who lived in rented house earns 10,000 to 15,000 a month. None of the respondents earning more than 15000 is living in rented houses. Most (64.9%) of them who owned the house earn less than Rs 5000/- on the contrary, only 1% own and earn more than Rs 25000/-.

Out of all individuals, 53.9 % male and 46.1 % females are working. Most of the individuals (71.4 %) earn less than rupees 5000. It can be seen that more women compared to men earn low income. 40.2 % females and 31.2 % males earn less than rupees 5000. Only 12 women earn between 10000 to 15000 rupees compared to 83 men. No woman earns more than 15000 rupees while 4 men earn more than 15000. This is because most of the women in Kusumpur Pahari work as domestic help which is low paying job (Table-3.17).

Table 3.17: Incomes per month by House ownership of individuals

Income per month	House ownership		Sex		Total
	Own	Rented	Male	Female	
Less than 5000	752(64.9%)	75(6.5%)	362(31.2%)	465(40.2%)	827(71.4%)
5000 to 10000	213(18.4%)	17(1.5%)	173(14.9%)	57(4.9%)	230(19.9%)
10000 to 15000	84(7.3%)	11(.9%)	83(7.2%)	12(1.0%)	95(8.2%)
15000 to 20000	4(.3%)	0(.0%)	4(.3%)	0(.0%)	4(.3%)
20000 to 25000	1(.1%)	0(.0%)	1(.1%)	0(.0%)	1(.1%)
25000 and Above	1(.1%)	0(.0%)	1(.1%)	0(.0%)	1(.1%)
Total	1055(91.1%)	103(8.9%)	624(53.9%)	534(46.1%)	1158(100.0%)

Most individuals in Kusumpur Pahari who is earning fall in the age group between 20-45 years. 71.4 % of the individuals are non workers. Out of the remaining individuals who are workers, 20.3 % of them are in the age group of 20- 45 years, 4.6 % individual workers are 46 years and above and 3.7 % individuals are less than 20 years of age.

720 out of 1008 (71.4 %) SC persons earn less than Rs 5000, 197 (19.5 %) of SC persons earn between Rs 5000 and Rs 10,000. More that 86 (8.5 %) earn between 10,000 and 15,000 and 5 person (0.50 %) earn more than 15,000 rupees. Among the OBC individuals 98 out of 139 persons (70.5 %) earn less than Rs 5000, 31 (22.3 %) of OBC persons earn between 5000 and 10,000 rupees, 9 (6.5 %) earn between 10,000 and 15,000.. Among high caste (general category), there are only 11 person out of which 9 (81.8 % earn less than 5000 rupees and the remaining 2 earn between Rs. 5000 and Rs.10, 000 (Table-3.18).

Table 3.18: Income of the individuals by Caste

Income per month	Caste			
	SC	OBC	General	Total
Less than 5000	720(62.2%)	98(8.5%)	9(.8%)	827(71.4%)
5000 to 10000	197(17.0%)	31(2.7%)	2(.2%)	230(19.9%)
10000 to 15000	86(7.4%)	9(.8%)	0(.0%)	95(8.2%)
15000 to 20000	3(.3%)	1(.1%)	0(.0%)	4(.3%)
20000 to 250000	1(.1%)	0(.0%)	0(.0%)	1(.1%)
25000 and Above	1(.1%)	0(.0%)	0(.0%)	1(.1%)
Total	1008(87.0%)	139(12.0%)	11(.9%)	1158(100.0%)

III.4 Basic Social Facilities and Civic Amenities in Kusumpur Pahari

This section describes different social facilities and civic amenities available in Kusumpur Pahari like, toilet, water, housing, ventilation and flooring inside the house, bathing space and cooking space, sanitation and cooking fuel. Information about amenities like luxury items etc that the respondents have is also provided.

Most of the respondent household had plastered floor (91 %) followed by mud floor (4.5 %), mosaic floor (3 %) and tiled floor (3 %) (Table-3.19). Different types of roofs were found in the houses of the study area. Most of them did not have a pakka roof. Most household had tin roof (68 %). 15.5 % household had concrete, 14.5 % household had thatched roof.

Table3.19: Type of floor by households

Type of floor	No of households	%age of households	Type of roof	No of households	%age of households
Mud	9	4.5	Thatched	29	14.5
Plastered	182	91.0	Tin	137	68.5
Mosaic	6	3.0	Asbestos	2	1.0
Tiles	3	1.5	Concrete	32	16.0
Total	200	100.0	Total	200	100.0

Most of the household respondents were living in a single room house (57 %), 33 % living in two room house. This means that 90 % of the respondents live in two room house or less. Only 6.5 % have three roomed house. There was one house with five rooms and another with ten rooms (Table-3.20).

Table 3.20: Numbers of rooms in the House

Numbers of room	No of household	% of household
1	114	57.0
2	66	33.0
3	13	6.5
4+	5	3.5
Total	200	100.0

It was reported by 93.2 % of the individuals have plastered floor in their houses. Very few (3.6 %) have mud floor, mosaic floor (2.2 %) and tiled floor (1.0 %). In all income categories majority had plastered floor. In less than 5000 income category 2.9 % had mud floor, 1.6 % had mosaic floor and 0.8 % had tiled floor. In all other income category a very small percent had mosaic or tiled floor (Table-3.21).

Table 3.21: Type of floor by income

Income per month	Type of floor				
	Mud	Plastered	Mosaic	Tiles	Total
Less than 5000	34(2.9%)	766(66.1%)	18(1.6%)	9(.8%)	827(71.4%)
5000 to 10000	5(.2%)	220(19.0%)	4(.3%)	1(.1%)	230(19.9%)
10000 to 15000	3(.3%)	87(7.5%)	3(.3%)	2(.2%)	95(8.2%)
15000 to 20000	0(.0%)	4(.3%)	0(.0%)	0(.0%)	4(.3%)
20000 to 250000	0(.0%)	1(.1%)	0(.0%)	0(.0%)	1(.1%)
25000 and Above	0(.0%)	1(.1%)	0(.0%)	0(.0%)	1(.1%)
Total	42(3.6%)	1079(93.2%)	25(2.2%)	12(1.0%)	1158(100.0%)

Most respondents (63.2 %) reported tin roof in their house, followed by concrete (23.3 %), thatched roof (12.4 %), asbestos (.6 %) and others (0.4 %). From less than 5000 up to 15000 income category majorities had in roof followed by concrete and thatched roof. In more than 5000 category, only one house has concrete roof and the rest had tin roofs (Table-3.22).

Table 3.22: Type of roof by Incomes

Income per month	Type of roof					Total
	Thatched	Tin	Asbestos	Concrete	Others	
Less than 5000	102(8.8%)	530(45.8%)	5(.4%)	186(16.1%)	4(.3%)	827(71.4%)
5000 to 10000	29(2.5%)	135(11.7%)	1(.1%)	64(5.5%)	1(.1%)	230(19.9%)
10000 to 15000	13(1.1%)	62(5.4%)	1(.1%)	19(1.6%)	0(.0%)	95(8.2%)
15000 to 20000	0(.0%)	3(.3%)	0(.0%)	1(.1%)	0(.0%)	4(.3%)
20000 to 250000	0(.0%)	1(.1%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
25000 and Above	0(.0%)	1(.1%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
Total	144(12.4%)	732(63.2%)	7(.6%)	230(23.3%)	5(.4%)	1158(100.0%)

Half the respondents stay in houses that have only one room. 37.2 % respondent's stays in houses that have two rooms, 8.5 % stay in 3 room houses and 3.5 % respondents stays in houses with four or more rooms. In less than 5000 income category 36.9 % respondents were living in one room, 26.3 % in two rooms, 5.9 % in three rooms and 2.3 % in four or more rooms. In 5000 to 10000 income category 8.9 % respondents lives in one room, 8.1 % in two rooms, 2.2 % in three rooms and 7 % in four or more rooms. In 10000 to 15000 income category 4.8 % respondents lives in one room, 2.5 % in two rooms, 4 % in three rooms and 4 % in four or more rooms. In more than 15000 income category three persons stays in one room, two persons stay in two rooms and one person stay in four rooms house (Table-3.23).

Table 3.23 Numbers of rooms by income

Income per month	Numbers of rooms				Total
	One room	Two rooms	Three rooms	Four rooms+	
Less than 5000	427(36.9%)	305(26.3%)	68(5.9%)	27(2.3%)	827(71.4%)
5000 to 10000	103(8.9%)	94(8.1%)	25(2.2%)	8(.7%)	230(19.9%)
10000 to 15000	56(4.8%)	29(2.5%)	5(.4%)	5(.4%)	95(8.2%)
15000 to 20000	1(.1%)	2(.2%)	0(.0%)	1(.1%)	4(.3%)
20000 to 250000	1(.1%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
25000 and Above	1(.1%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
Total	588(50.8%)	431(37.2%)	98(8.5%)	41(3.5%)	1158(100.0%)

As regards kitchen, 71.5 % of households (143 households) reported that they did not have separate space for kitchen inside the house. Out of these 143 households 55.2 % did not have ventilation and 58.74 % households were living in one room house. 51 out of these 143 households (35.66%) did not have ventilation and were living in single room house (Table-3.24).

More than half of the household (56 %) do not have any window to facilitate ventilation in the houses. It is important to note that 89 % houses are being own as compare to only 11 % which are rented. So despite owning, ventilation could not be considered. Most respondent lived in houses owned by them. Only 11 % of respondents lived in rented room with their families.

Table 3.24: No of rooms, ventilation and cooking space of Households

Cook Space	No of rooms	Ventilation		
		Yes	No	Total
Inside house in Separate Kitchen	1	7	11	18
	2	8	6	14
	3	2	2	4
	Total	17	19	36
	Inside house with no Separate Kitchen	1	33	51
2		23	23	46
3		4	3	7
4		4	1	5
5		0	1	1
Total		64	79	143
Outside house	1	2	10	12
	2	5	1	6
	3	0	2	2
	10	0	1	1
	Total	7	14	21
All	All Total	88	112	200
	All total %	44.00	56.00	100

89 % households live in their own house and 11 % live in rented houses. The rent paid by household in Kusumpur Pahari ranges from Rs 500 to 4500. Most households pay Rs 1000 or less as rent. The rent does not exceed Rs 1800 for most households. Only one household was paying Rs 4500. This was because they had rented 3 rooms as they

had a joint family. In the category Rs 1500 and above, there are 4 houses rented for Rs 1500; and one each for Rs 1800 and Rs 4500 (Table-3.25).

Table 3.25: Houses by Rent Paid in households

	No of Households	% of Households
Own House	178	89.00
Rented	22	11.00
Rent (in Rupees)	No of Rented Houses	%age of Rented
Less than 600	2	1.0
600 to 900	2	1.0
900 to 1200	9	4.5
1200 to 1500	2	1.0
1500 to above	6	3.0
Total	200	100.0

As regards cooking space, 18 % of household have separate cooking spaces inside the household, 11 % have cooking space outside the house while majority of households (71 %) have cooking space inside the house but no separate kitchen.

As regards the cooking space by income, Most of the respondents (70.8 %) reported cooking space inside the house with no separate kitchen. 19.2 % respondents had separate kitchen inside the house and 10 % respondents had kitchen outside the house. In less than 5000 income category 50.6 % had cooking space inside the house with no separate kitchen, 13.6 % had separate kitchen inside house and 7.3 % had kitchen outside house. In Rs.5000 to 10000 income category 14.4 % had cooking space inside the house with no separate kitchen, 3.6 % had separate kitchen inside house and 1.8 % had kitchen outside house. In less than Rs.15000 to 20000 income category 5.4 % had kitchen inside house, 1.9 % had separate kitchen inside house and 0.9 % had kitchen outside house. Out of the six individuals earning more than 15000, five had no separate kitchen inside the house and only one had separate kitchen inside house (Table-3.26).

Table 3.26: cooking space of individuals by income per month

Income per month	Cooking space			
	Separate kitchen Inside house	Inside house with no separate kitchen	Outside house	Total
Less than 5000	157(13.6%)	586(50.6%)	84(7.3%)	827(71.4%)
5000 to 10000	42(3.6%)	167(14.4%)	21(1.8%)	230(19.9%)
10000 to 15000	22(1.9%)	62(5.4%)	11(.9%)	95(8.2%)
15000 to 20000	0(.0%)	4(.3%)	0(.0%)	4(.3%)
20000 to 250000	1(.1%)	0(.0%)	0(.0%)	1(.1%)
25000 and Above	0(.0%)	1(.1%)	0(.0%)	1(.1%)
Total	222(19.2%)	820(70.8%)	116(10.0%)	1158(100.0%)

Out of 200 household, less than half (47.5 %) household reported to having a separate bathing space in their houses. Almost half the respondents (49.6 %) reported bathing space inside the house while a little more than half the respondent (50.4%) had no separate bathing space. In less than Rs 5000 income category 35.4 % had bathing space inside and 36.0 % had no bathing space. In Rs 5000 to Rs10000 income category 9.6 % had bathing space inside the house while 10.3 % had no bathing space (Table-3.27).

Table 3.27: Bathing space used by the individuals by income

Income per month	Bathing space		
	Yes	No	Total
Less than 5000	410(35.4%)	417(36.0%)	827(71.4%)
5000 to 10000	111(9.6%)	119(10.3%)	230(19.9%)
10000 to 15000	49(4.2%)	46(4.0%)	95(8.2%)
15000 to 20000	3(.3%)	1(.1%)	4(.3%)
20000 to 250000	1(.1%)	0(.0%)	1(.1%)
25000 and Above	0(.0%)	1(.1%)	1(.1%)
Total	574(49.6%)	584(50.4%)	1158(100.0%)

Most of the respondents (63.1 %) reported using LPG as cooking fuel followed by fire wood (39.3 %), and kerosene oil (7.6 %). In the income category of less than 5000, 44.7 % use LPG, 21.1 % use firewood and 5.6 % use kerosene oil. In the income category of Rs5000 to Rs 10000, 13.0 % use LPG, 5.4% use firewood and 1.4 % use kerosene oil as cooking fuel. In the income category if Rs10,000 to Rs 15,000, 4.2 % respondents use LPG, 2.7 % use firewood and 0.6 % use kerosene oil as cooking fuel. In the income category of more than 15,000, out of 6 respondents, 5 uses LPG and only one uses firewood as cooking fuel. Since most of the households live in only one room, they do not have place for keeping the firewood. They reported that firewood is

mostly kept on the roof. If there is rain then there is a big loss as the wood becomes wet. Women who go to fetch firewood also have face minor injuries like scratches or sometimes they slip and fall (Table-3.28).

Table 3.28: Cooking fuel by income

Income per month	Cooking Fuel			
	LPG(Gas)	Kerosene oil	Fire wood	Total
Less than 5000	518(44.7%)	65(5.6%)	244(21.1%)	827(71.4%)
5000 to 10000	151(13.0%)	16(1.4%)	63(5.4%)	230(19.9%)
10000 to 15000	57(4.2%)	7(.6%)	31(2.7%)	95(8.2%)
15000 to 20000	4(.3%)	0(.0%)	0(.0%)	4(.3%)
20000 to 250000	1(.1%)	0(.0%)	0(.0%)	1(.1%)
25000 and Above	0(.0%)	0(.0%)	1(.1%)	1(.1%)
Total	731(63.1%)	88(7.6%)	339(39.3%)	1158(100.0%)

Most of the respondents (71.8 %) reported spending less than Rs500 rupees monthly on their cooking fuel. 24.3 % respondents reported spending between Rs 500-Rs1000 monthly and 3.9 % respondents reported spending between Rs 1000-1500 monthly on cooking fuel. Among those who spent less than Rs 500, 51.9 % had income of less than Rs 5000, 13.6 % had income between Rs 5000 and 10,000, 6.0 % had income between Rs 10,000 and Rs15,000 and only 0.4 % had income of more than Rs15000. Among those who spend between Rs 500 to Rs 1000 on cooking fuel, 16.7 % had income of less than Rs 5000, 5.9 % had income between Rs5000 and Rs10,000, 1.6 % had income between Rs10,000 and Rs15,000 rupees and only 0.2 % had income of more than Rs15000. Among those who spend between Rs1000 to Rs1500 on cooking fuel, 2.8 % had income of less than Rs5000, 0.3 % had income between Rs 5000 and Rs 10,000, and 0.7 % had income between Rs10, 000 and Rs15, 000 rupees and none who had income of more than Rs 15000 rupees (Table-3.29).

Table 3.29: Monthly Expenditure on Cooking Fuel by income of individuals

Income per month	Monthly Expenditure on Cooking Fuel			
	Less than 500	500-1000	1000-1500	Total
Less than 5000	601(51.9%)	193(16.7%)	33(2.8%)	827(71.4%)
5000 to 10000	158(13.6%)	68(5.9%)	4(.3%)	230(19.9%)
10000 to 15000	69(6.0%)	18(1.6%)	8(.7%)	95(8.2%)
15000 to 20000	2(.2%)	2(.2%)	0(.0%)	4(.3%)
20000 to 250000	1(.1%)	0(.0%)	0(.0%)	1(.1%)
25000 and Above	1(.1%)	0(.0%)	0(.0%)	1(.1%)
Total	832(71.8%)	281(24.3%)	45(3.9%)	1158(100.0%)

The respondents in Kusumpur Pahari have different items related to information technology. Mobile phone is most common as 94.5 % households own it. This is followed by radio (9.0 %), computer (4.5%), news paper (3.0 %), lap top (1.0 %) and land line phone (0.3%) (Table-3.30).

Table 3.30 Information technology gadgets in households

Information technology	No of households	% of households	Information technology	No of households	% of households
Laptop	2	1.0	Land line phone	1	.3
Computer	9	4.5	News paper	6	3.0
Mobile	189	94.5	Radio	18	9.0
N value	200	100.0	N value	200	100.0

The Households gadgets owned by different luxury items owned by households in Kusumpur Pahari a Television (91.5 %) followed by fan (87.5 %), cooler(62.5 %), refrigerator (49.5 %), Washing machine (7.0 %) and only one house had an air conditioner. (Table-3.31).

Table 3.31: Households Gadgets in Kusumpur Pahari

HH Gadgets	No of households	% of households	Luxury items	No of households	% of households
Television	183	91.5	Air conditioner	1	.3
Refrigerator	99	49.5	Fan	175	87.5
Washing machine	14	7.0	Cooler	125	62.5
N value	200	100.0	N value	200	100.0

The Table 3.32 below shows vehicles owned by households in the study area, Kusumpur. Highest number of households 157(78.5) % own Cycle, followed by 24 (12.0) that had motor cycles, scooter is owned by 18 (9.0 %) households and only 2 (1.0 %) households own car/four wheeler.

Table 3.32: vehicles owned

vehicles	No of households	% of households	Transport facilities	No of households	% of households
Motor cycle	24	12.0	Car/four wheeler	2	1.0
Cycle	157	78.5	Scooter	18	9.0
N value	200	100.0	N value	200	100.0

As far the water supply is concerned, for 58.0 % of the household the source was water tanker, followed by 26.5 % household that used public tube well. Only 9.5 % of household had public tap and 6.0 % households had sources other than these.

The source water supply according to caste suggest that among SCs and OBCs most of the households get water from water tanker (57.5%) and public taps (26%). Among high caste households, none use tanker or public tap. Out of a total of 116 households that get water from tanker, 97 households belong to SCs and 18 to OBC community. Public tap is used by 18(40%) SC households and one (0.5%) OBC household (Table-3.33).

Table 3.33: source of water supply by caste of households

Caste	Source of water supply				
	Public tap	Public tube well	Tanker	Others	Total
SC	18(9.0%)	46(23.0%)	97(48.5%)	11(5.5%)	172(86.05)
OBC	1(.5%)	6(3.0%)	18(9.0%)	1(.5%)	26(13.0%)
General	0(0.0%)	1(.5%)	0(0.0%)	1(.5%)	2(1.0%)
Total	19(9.5%)	53(26.5%)	116(58.0%)	12(6.0%)	200(100.0%)

More than half the households 113 (56.5 %) household reported that water supply was enough for their daily needs whereas 43.5 % of the households said that water supply was not enough for their daily needs. This reflects on the security of supply and the consequences of scarce water (Table-3.34).

Table 3.34 Water supply enough for daily need by households

Water supply enough for daily need	No of Households	%age of Households
Yes	113	56.5
No	87	43.5
Total	200	100.0

To supplement the requirement 24 % of households have to buy water from Delhi Jal Board, 16.5 % households get water from bore well, 24 % get from their work place. Two households (1%) get from others places to supplement water for their daily needs (Table-3.35).

Table 3.35: Source from where unmet need for water is supplemented by households

Source from where unmet need for water is supplemented	No of Households	%age of households
No unmet need of water	103	51.5
Bore well water	33	16.5
Buy water	48	24.0
Work place	14	7.0
Others	2	1.0
Total	200	100.0

shows distribution of households according to problems faced while collecting water. Most of the households (70) reported to have had problems while carrying water home. Out of all those who reported quarrel, three reported being sent away by others in the queue, four reported of verbal abuse, two reported not being allowed to collect the water till everyone else finished (Table-3.36).

Table 3.36: Problems faced while collecting water

Problems		No of Households	%age of households
When	What		
Buying water	—	18	9.0
carrying water home	—	70	35.0
—	Body ache	8	4.0
—	Fall/injury during collection of water	5	2.5
Time spend	—	19	9.5
—	Quarrel and verbal abuse	9	4.5
Queuing for collecting water	—	42	21.0
Total	—	200	100.0

Households have to face many problems while collecting water. The Delhi Jal Board supply tanker is the main source of water for people in Kusumpur Pahari. Though the

tanker comes every day, each day it goes to a different block. This means that water is supplied only once in seven to ten days in one block. Shortage of water affects the life of people in many ways. They have to make long queues to collect water. They have to face many problems because of this. They also have to face violence because of shortage of water. It is common to have quarrels over water because everybody tries to get water from the same source before it finishes. Verbal abuse is common and due to heavy crowd people fall and injure they while pushing each other during water collection. Sometimes it got so rough that people had to call the police to stop violence. Since people get water only once in a week or ten days, they have to store the same water for drinking and other purposes. Sometimes the water is chlorinated but sometimes it is not. The shortage of safe water also leads to health problems. One woman said *“jab paani nahi hoga to hum kahan se safai karenge? Jab safai nahi honggi to bimari to honggi hi...”*³. Another health problem is related to carrying water resulting in people suffering with body ache. As household s greatly depends upon the tanker to provide their daily water requirements sometimes children have to miss school so that they can collect water. When the tanker comes mothers too have to leave behind crying children. They have to postpone all other important works for other days, so that they do not miss the tanker. *One of the woman expresses the problem of water as as “agar yahan koi mar bhi jae, to koi paani nahi deta”*⁴. To deal with this problem many households buy water from the nearby public toilet. The local staff charges them Rs 5 per can of water. Some others get water from their workplace or have to go to Munirka, RK Puram or Basant Lok, near Priya to collect water. There are borewells in many blocks, but everyone cannot collect water from them. Along with the Pradhan, the residents have made an arrangement that some of the households will be able to get water. Households have been allotted numbers and accordingly water is filled. However some respondents shared that only those who were powerful and can put up a fight are the ones who are able to get water from this source. 35 % of households reported that they face problem in carrying water from the source to their house because they do not have supply water line. About 25 % of households said that it was a problem to collect water because they had wait in long

³ When there will be no water how will we clean up? Where there will be no cleanliness, there is bound to be diseases

⁴ Even if somebody dies here, no one will give water

queues for collecting water. 39.5 % stated others problems like having a quarrel while collecting water, 2.5 % reported injury caused by falling during collection and 4 % of body aches due to carrying water. (Plate 1, 2, 3, 4, 5)

Women carry out the primary responsibility of collecting water. 74 % of households reported women collecting water, while in 26 % of household's women did not collect water. In 45.5 % households men collected water, while in 54.5 % of households men do not collect water (Table-3.37).

Table 3.37: Persons who collect water in households

Female in Household	No of households	% of households	Male in the Household	No. of households	% of households
Female in which households do not collect water	52	26.0	do not collect water	109	54.5
Female collect water	148	74.0	collect water	91	45.5
Total	200	100.00	Total	200	100.00

All the households have electricity connection but 95 % have a legal connection while 5 % do not have a legal connection. They often tap the electricity from the poles and do not pay separate bill for its use. Electricity is available twenty four hours mostly. However, there is power cut during summer season (Table-3.38).

Table 3.38: Electricity available in the households

Electricity available in the houses	No of Households	%age of Households
Yes (legal connection)	190	95.0
Others	10	5.0
Total	200	100.0

Note* others includes eight households that have illegal connection (no meter).

Table-3.39 states that the average electricity bill for 48 % of households is between Rs 500 to Rs 1000. 39 % of households pay less than Rs500, 8 % pay between Rs 1000-1500, 3.5 % pay Rs 1500 to Rs 2000 and 1 % pay more than Rs 2000 as monthly electricity bill.

Table 3.39 Average electricity monthly bill (in rupees) by households

Average electricity monthly bill (in rupees)	No of Households	%age of Households
Less than 500	79	39.5
500 to 1000	96	48.0
1000 to 1500	16	8.0
1500 to 2000	7	3.5
2000 to Above	2	1.0
Total	200	100.0

Table-3.40 shows that 65 % of the households use LPG as the main fuel used for cooking, followed by 27.5 % using firewood, and 7 % using kerosene oil. Earlier every household got 22 litres of kerosene oil from the ration shop but for the last one year they have been receiving only 5 litres for Rs 75. 50 % of the households use no additional cooking fuel with 38 % households that used firewood as additional fuel. 5 % use LPG as additional fuel and 6.5 % use kerosene oil as additional fuel.

Table 3.40: Cooking and Additional cooking Fuel used in households

Cooking Fuel used mainly	Number of Households	%age of households	Additional cooking fuel used	Number of Households	%age of households
LPG	131	65.5	LPG	10	5.0
Fire wood	55	27.5	Fire wood	76	38.0
Kerosene oil	14	7.0	Kerosene oil	13	6.5
Electric Heater	0	0	Electric Heater	1	0.5
			No Additional cooking fuel used	100	50.0
Total	200	100.0	Total	200	100.0

As regards expenditure on cooking fuel, 56 % of households have to spend less than Rs 500, 22 % households have to spend between Rs500 to Rs 1000 and 1.50 % of households have to spend Rs1000-1500 on cooking fuel (Table-3.41).

Table 3.41: Monthly Expenditure on cooking fuel by households

Monthly expenditure on cooking fuel	No of households	%age of households
No Monthly expenditure on cooking fuel	41	20.50
Less than 500	112	56.00
500 to 1000	44	22.00
1000 to 1500	3	1.50
Total	200	100.00

Note* some households do not have to spend any money on cooking fuel because they are completely dependent on fire wood, which they collect themselves.

It is important to note that the household in study area have toilet which can be used only for urination, and all household which have toilet which can be used for both urination and defecation. Table-3.42 shows the availability of toilets in Kusumpur Pahari area.

Majority of the households i.e. 83 % use open space for urination and 94.5 % go to the open space for defecation. This is because most of the households do not have space and water for constructing toilets. They go to the hilly areas close by. Going to open spaces throws many problems especially for women. It was reported that women were molested and even raped while they went to the open for defecation. Going to such place at night was also unsafe at the same time during the rainy season the place became slippery. Many people i.e. 16.5 % have constructed small space as urinals within their houses. Whereas only 6 houses out of 200 i.e.3 % have latrines built in their houses. However none of them have water available for flushing. They have to get water from outside. Public latrine is used by only 5 households that constitute 2.50 % only. There is only one public toilet in the D block which is far for people living in other blocks. People do not use it because they have to pay money and although using it is chargeable the toilets are not kept clean. Two rupees is charged for the urinal and five rupees is charged for using the latrine in the public toilets. Rupees five is charged for bathing and rupees ten for bathing and washing clothes.

Table 3.42: Availability of Toilets by households

Urination Facility in houses	No of houses	% of houses	Defecation Facility in houses	No of houses	% of houses
Toilet at home	33	16.5	Latrine at home	6	3.0
Public toilet	1	0.50	Public latrine	5	2.50
In the open area	166	83.00	In the open area	189	94.50
Total	200	100.00	Total	200	100.00

Table-3.43 shows that, 88 % of the households reported having open drains next to their houses and 42 % (84 households) said that the roads got clogged with drain water. 16 % of households said that the roads got clogged sometimes and 33 % stated that roads got clogged during rainy season. (Plate 11, 12)

Table 3.43: Drainage Facility

Drainage facility in houses	No of houses	% of houses
Open drainage	176	88.00
Covered drainage	24	12.00
Total	200	100.00

As regards the cleaning of the drains, 41.50 % of the households clean the drains themselves and 12.50 % households stated that the MCD workers cleaned the drains close to their houses, and 50 % of the households said that they had to pay an amount of Rs 30 month to MCD workers to get the drains cleaned. The MCD is responsible for cleaning the drains, but they do not clean the lanes which are away from the main road. All the households had paved a concrete road to their houses (Table-3.44).

Table 3.44: cleaning of drains by Households

Cleaning of drains	No of households	% household
MCD worker(without paying)	25	12.50
Self	83.50	41.50
MCD workers(with payment)	92	50.00
Total	200	100.00

Kusumpur Pahari has all the features of being a slum, crowded living, lack of water facilities and sanitation and open drainage system. Though electricity is available, water is a crises and toilets are major problems. Because of shortage of water, cleanliness and hygiene cannot be maintained. Demographic conditions show that large number of household belongs to SC social group, majority is primary educated and most of them are doing labour work or petty jobs. The unhygienic conditions can lead to high morbidity patterns, which will be discussed in the next chapter. (plate 6, 7, 9)

Chapter 4

Morbidity Pattern in Kusumpur Pahari

CHAPTER-IV

MORBIDITY PATTERN IN KUSUMPUR PAHARI

This chapter deals with the morbidity patterns in Kusumpur Pahari. The members of the household were asked to report on their illness, minor and major and disease wise. For minor last three months and for major last one year was recorded based on the self report of the respondent. There can be limitation of recall of the episodes by the respondents.

The diseases that were reported by individuals were classified according to the standard medical book (Pintu and Masum, 1998). The classification has been done as following:

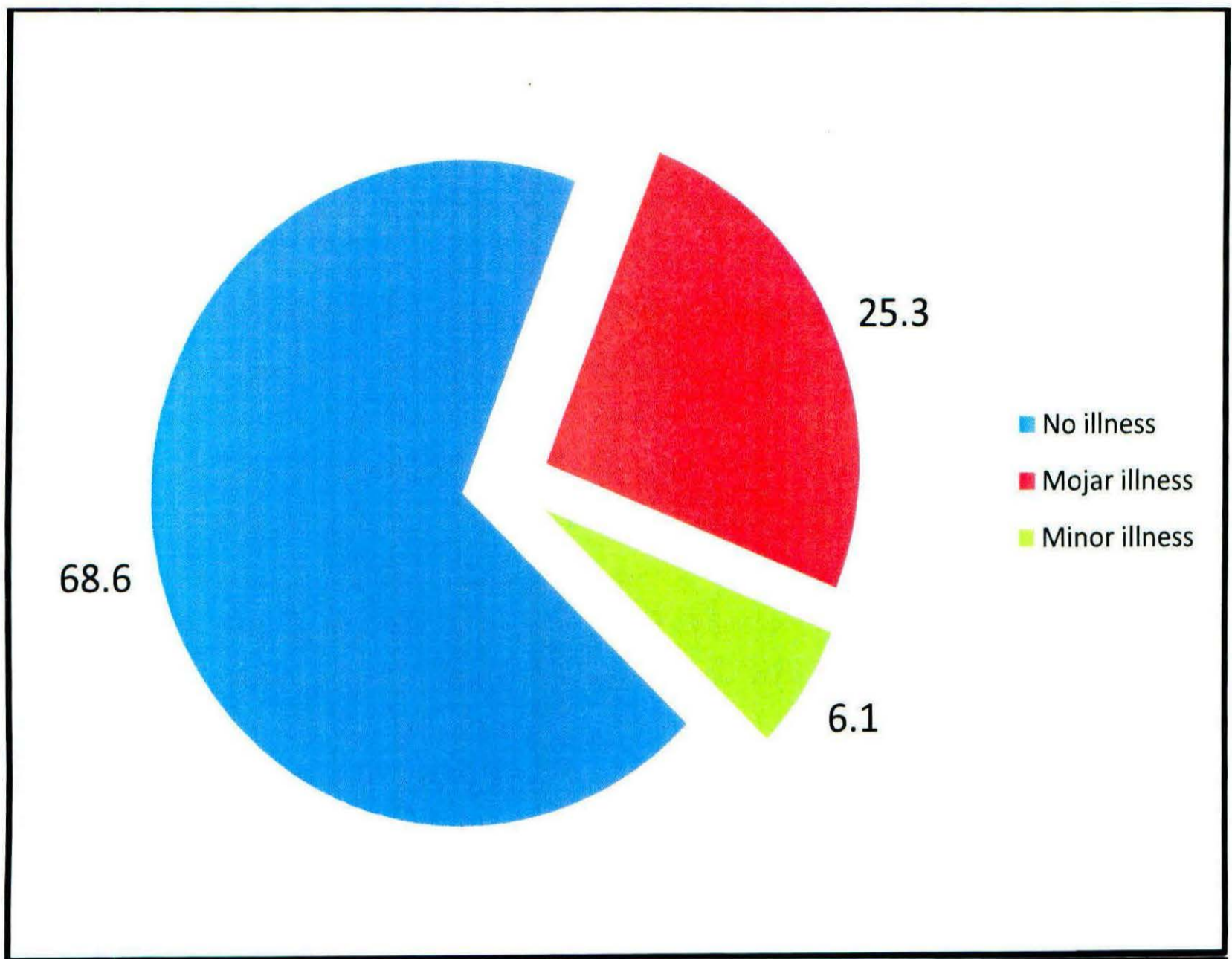
1-Diseases of the respiratory system-Tuberculosis, Pneumonia, Asthma, 2- Diseases of the digestive system- Gastric, Diarrhoea, Abdominal pain, Lose motion, 3- Diseases of the skin and sexually transmitted diseases- Lacoria, Allergy, 4- Pregnancy, child birth related- Complication in women related to pregnancy and child birth, Problem new born baby,5- Symptoms of the cold, cough & fever- Chicken guinea, Fever, Cold and Cough,6- Diseases of the connective tissues, joints & bones- Body pain, Joints pain, Pain of aches,7- Injury & Poising- Accident, Finger cut, Fracture, Bone crake, 8- Diseases of the cardiovascular system- Hart related diseases, Blood presser, 9- Diseases of the blood- Anemia, Hemophilia, 10- Diseases of the liver & billiary system- Jaundice, 11- Endocrine & metabolic diseases- Diabetes,12- Diseases due to infection- Viral fever, Chicken pox, Malaria, Worm, Typhoid.

Table 4.1 and Figure 4.1 give the morbidity pattern in Kusum Pahari. Out of 1158 individuals, 794 individuals (68.6 %) reported no illness. However, it is important to note that one fourth of the study population (25.3%) reported to have suffered from major illness in the past. 25.3 % reported major illness and 6.1 % reported minor illness.

Table 4.1: Reported Morbidity (major and minor) by individuals

Major and minor illness	No of individuals	Percent of individuals
No Morbidity	794	68.6
All Major illness	293	25.3
All Minor illness	71	6.1
Total	1158	100.0

Figure 4.1 Reported Morbidity (major and minor) by individuals



Among reported illnesses, the most commonly reported illness is symptoms of cold, cough and fever. 15.10 % of all respondents' complained of this. 6.60 % reported other illness⁵, 2.60 % reported diseases of the digestive system, 1.50 % reported diseases of the connective tissues, joints & bones and 1.20 % reported diseases due to infection. Other diseases were reported by 6.60 % of the respondents (Table-4.2).

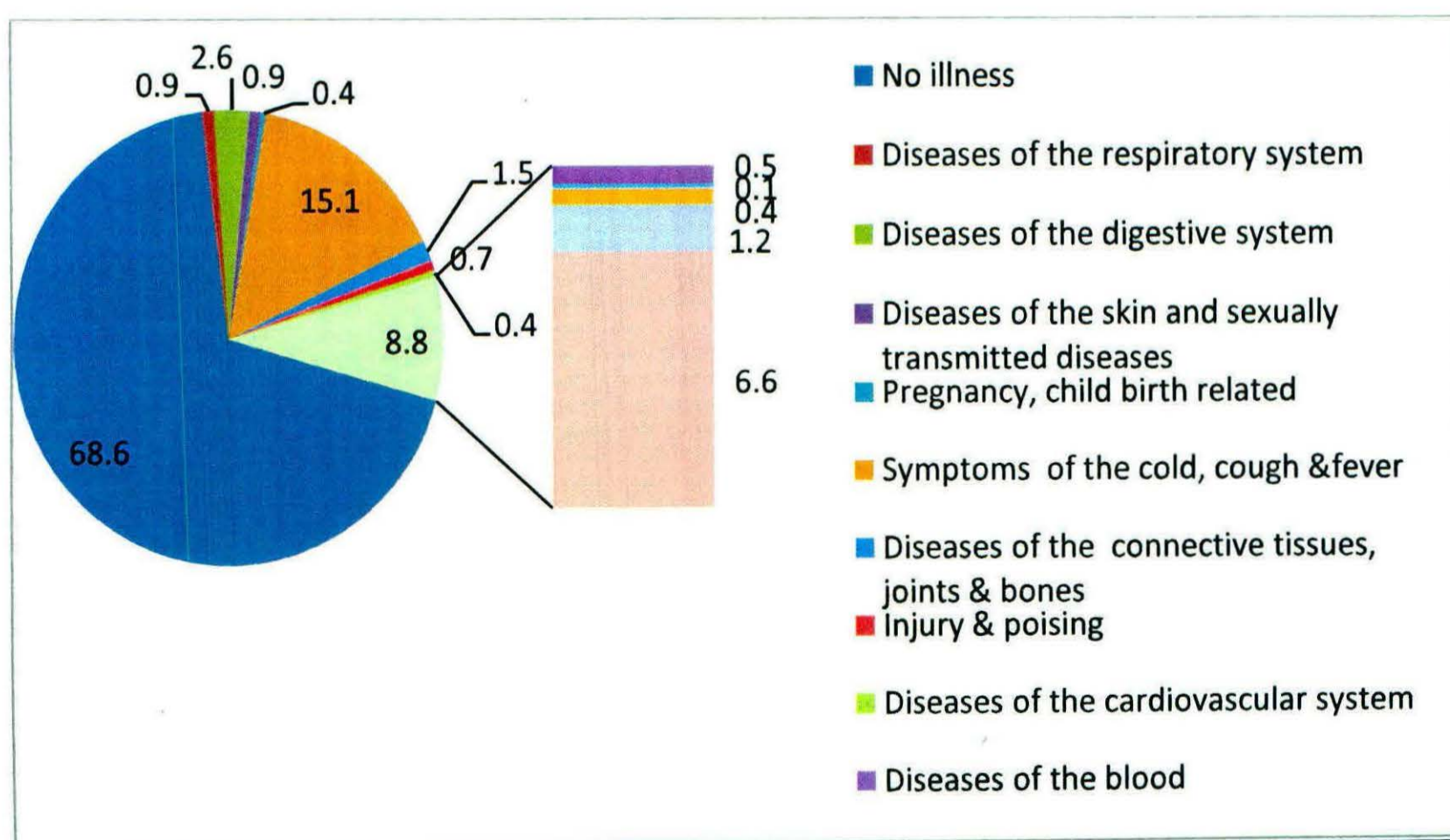
⁵ Other illnesses include swelling, giddiness, fits, stone (gall bladder and kidney), headache, ear discharge, dental problem, eye problem

Table 4.2: Reported Morbidity by individuals

Reported Morbidity	Individuals reporting Morbidity	Percent individuals reporting Morbidity
No morbidity	794	68.60
Diseases of the respiratory system	11	0.90
Diseases of the digestive system	30	2.60
Diseases of the skin and sexually transmitted diseases	10	0.90
Pregnancy, child birth related	5	0.40
cold, cough & fever	175	15.10
Diseases of the connective tissues, joints & bones	17	1.50
Injury & poisoning	8	0.70
Diseases of the cardiovascular system	5	0.40
Diseases of the blood	6	0.50
Diseases of the liver & biliary system	1	0.10
Endocrine & metabolic diseases	5	0.40
Diseases due to infection	14	1.20
Others diseases	77	6.60
Total Reported Morbidity	1158	100.00
All Major illness	293	25.3
All Minor illness	71	6.1

More than 68% did not report any illness. This is also because of the perception of self being ill or otherwise (Figure-4.2)

Figure- 4.2: Distribution of Morbidity



Most of the respondent reported single episode of morbidity over multiple or consecutive episode of morbidity. In case of single episode of morbidity, main illness is symptom of cold and fever. In case of two times or three times morbidity, the main reason is other illnesses (Table-4.3).

Table 4.3: Reported Morbidity by episodes

Reported Morbidity by duration of illness episode(in days)	duration of illness by episode(in days)					
	No episode	One episode	Two episode	Three episode	Four episode	Total
No illness	791(68.3%)	3(.3%)	0(.0%)	0(.0%)	0(.0%)	794(68.6)
Diseases of the respiratory system	5(.4%)	2(.2%)	4(.3%)	0(.0%)	0(.0%)	11(.9%)
Diseases of the digestive system	13(1.1%)	15(1.3%)	1(.1%)	0(.0%)	1(.1%)	30(2.6%)
Diseases of the skin and sexually transmitted diseases	6(.5%)	1(.1%)	3(.3%)	0(.0%)	0(.0%)	10(.9%)
Pregnancy, child birth related	3(.3%)	0(.0%)	2(.2%)	0(.0%)	0(.0%)	5(.4%)
Symptoms of the cold, cough & fever	76(6.6%)	93(8.0%)	5(.4%)	1(.1%)	0(.0%)	175(15.1%)
Diseases of the connective tissues, joints & bones	14(1.2%)	3(.3%)	0(.0%)	0(.0%)	0(.0%)	17(1.5%)
Injury & poisoning	2(.2%)	4(.3%)	2(.2%)	0(.0%)	0(.0%)	8(.7%)
Diseases of the cardiovascular system	3(.3%)	2(.2%)	0(.0%)	0(.0%)	0(.0%)	5(.4%)
Diseases of the blood	3(.3%)	3(.3%)	0(.0%)	0(.0%)	0(.0%)	6(.5%)
Diseases of the liver & billiary system	0(.0%)	1(.1%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
Endocrine & metabolic diseases	1(.1%)	4(.3%)	0(.0%)	0(.0%)	0(.0%)	5(.4%)
Diseases due to infection	8(.7%)	5(.4%)	1(.1%)	0(.0%)	0(.0%)	14(1.2%)
Others diseases	39(3.4%)	22(1.9%)	11(1.1%)	3(.3%)	2(.2%)	77(6.6%)
Total	964(83.2%)	158(13.6%)	29(2.5%)	4(.3%)	3(.3%)	1158(100.0%)
Total Reported Morbidity	173(14.9%)	155(13.3%)	29(2.5%)	4(.3%)	3(.3%)	364(32.4%)

Out of those who reported morbidity episode, 13.60 % respondent reported one time (episode/instance) morbidity, 2.50 % reported two time morbidity, 0.30 % reported three time morbidity, and 0.30 % reported four time morbidity. Among them, only 2.5 % of total respondents were ever hospitalized.

In all the age categories, symptoms of cold cough and fever followed by other diseases are most common. Infections are more common in children of fifteen years or below. The cardiovascular diseases are found in those who are above 25 years. There are 3 individuals in the age group of 25-35 years who have cardiovascular problem even though they are young. Digestive problem is common in all ages. This could be because of drinking water (Table-4.4).

Table 4.4 Reported Morbidity by age group of individuals

Reported Morbidity	Age group									
	Less than 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to +
No Morbidity	89 (7.70)%	98 (8.80)	106 (9.20)	137 (11.80)	88 (7.60)	125 (10.80)	91 (7.90)	38 (3.30)	16 (1.40)	6 (.50)
Diseases of the respiratory system	2 (.20)%	1 (.10)	1 (.10)	1 (.10)	0 (.00)	2 (.20)	3 (.30)	0 (.00)	1 (.10)%	0 (.00)
Diseases of the digestive system	4 (.30)%	4 (.30)	0 (.00)	7 (.60)	2 (.20)	4 (.30)	6 (.50)	3 (.30)	0 (.00)	0 (.00)
Diseases of the skin and sexually transmitted diseases	0 (.00)	1 (.10)	0 (.00)	1 (.10)	1 (.10)	4 (.30)	1 (.10)	2 (.20)	0 (.00)	0 (.00)
Pregnancy, child birth related	0 (.00)	0 (.00)	0 (.00)	0 (.00)	1 (.10)	1 (.10)	2 (.20)	1 (.10)	0 (.00)	0 (.00)
Symptoms of the cold, cough & fever	37 (3.20)%	30 (2.60)	15 (1.30)	20 (1.70)	19 (1.60)	22 (1.90)	17 (1.50)	10 (.90)	5 (.40)	0 (.00)
Diseases of the connective tissues, joints & bones	1 (.10)%	1 (.10)	2 (.20)	2 (.20)	1 (.10)	5 (.40)	3 (.30)	1 (.10)	1 (.10)	0 (.00)
Injury & poisoning	2 (.20)%	0 (.00)	0 (.00)	1 (.10)	0 (.00)	3 (.30)	1 (.10)	0 (.00)	1 (.10)	0 (.00)
Diseases of the cardiovascular system	0 (.00)%	0 (.00)	0 (.00)	0 (.00)	0 (.00)	3 (.30)	1 (.10)	1 (.10)	0 (.00)	0 (.00)
Diseases of the blood	1 (.10)%	1 (.10)	1 (.10)	1 (.10)	0 (.00)	2 (.20)	0 (.00)	0 (.00)	0 (.00)	0 (.00)
Diseases of the liver & biliary system	0 (.00)%	0 (.00)	0 (.00)	0 (.00)	0 (.00)	1 (.10)	0 (.00)	0 (.00)	0 (.00)	0 (.00)
Endocrine & metabolic diseases	0 (.00)%	0 (.00)	0 (.00)	1 (.10)	0 (.00)	0 (.00)	2 (.20)	1 (.10)	0 (.00)	1 (.10)
Diseases due to infection	3 (.30)%	4 (.40)	1 (.10)	3 (.30)	2 (.20)	0 (.00)	0 (.00)	1 (.10)	0 (.00)	0 (.00)
Others diseases	2 (.20)%	4 (.40)	8 (.70)	11 (.90)	9 (.80)	14 (1.20)	14 (1.20)	2 (.20)	8 (.70)	5 (.40)
Total Reported Morbidity	141 (12.2)%	144 (12.40)	134 (11.60)	185 (16.00)	123 (10.60)	186 (16.10)	141 (12.20)	60 (5.20)	32 (2.80)	12 (1.00)

Table-4.5 shows that in case of some diseases males report the problem more compared to females. These are other diseases (male 4.20 % and female 2.40 %), diseases due to infection (male 0.90 % and female 0.30 %), injury and poisoning (male 0.50% and female 0.20 %). In some other diseases like respiratory infections women report more morbidity than men (female 0.70 % and male 0.30 %). This can be due to use of cooking fuels that cause smoke.

Table 4.5 Reported Morbidity by sex of individuals

Reported Morbidity	Sex		
	Male	Female	Total
No Morbidity	424 (36.60)%	370 (32.00)%	794 (68.60)%
Diseases of the respiratory system	3 (.30)%	8 (.70)%	11 (.90)%
Diseases of the digestive system	14 (12.00)%	16 (1.40)%	30 (2.60)%
Diseases of the skin and sexually transmitted diseases	4 (.30)%	6 (.50)%	10 (.90)%
Pregnancy, child birth related	0(.0%)	5 (.40)%	5 (.40)%
Symptoms of the cold, cough & fever	92 (7.90)%	83 (7.20)%	175 (15.10)%
Diseases of the connective tissues, joints & bones	9 (.80)%	8 (.70)%	17 (1.50)%
Injury & poisoning	6 (.50)%	2 (.20)%	8 (.70)%
Diseases of the cardiovascular system	2 (.20)%	3 (.30)%	5 (.40)%
Diseases of the blood	4 (.30)%	2 (.20)%	6 (.50)%
Diseases of the liver & biliary system	1 (.10)%	0 (.00)%	1 (.10)%
Endocrine & metabolic diseases	4 (.30)%	1 (.10)%	5 (.40)%
Diseases due to infection	10 (.90)%	4 (.30)%	14 (1.20)%
Others diseases	49 (4.20)%	28 (2.40)%	77 (6.6)
Total Reported Morbidity	642 (53.90)%	534 (46.10)%	1158 (100.00)%

In some of the diseases there is difference between morbidity reported by married and unmarried individuals. Skin and sexually transmitted diseases are very less (Table-4.6).

Table 4.6: Reported Morbidity by marital status of individuals

Reported Morbidity	Marital status		
	Married	Unmarried	Total
No Morbidity	315 (27.20)%	479 (41.4)%	794 (68.6)%
Diseases of the respiratory system	6 (.50)%	5 (.40)%	11 (.90)%
Diseases of the digestive system	15 (1.30)%	15 (1.30)%	30 (2.60)%
Diseases of the skin and sexually transmitted diseases	8 (.70)%	2 (.20)%	10 (.90)%
Pregnancy, child birth related	5 (.40)%	0 (.00)%	5 (.40)%
Symptoms of the cold, cough & fever	68 (5.90)	107 (9.20)%	175 (15.10)%
Diseases of the connective tissues, joints & bones	9 (.80)%	8 (.70)%	17 (1.50)%
Injury & poisoning	4 (.30)%	4 (.30)%	8 (.70)%
Diseases of the cardiovascular system	4 (.30)%	1 (.10)%	5 (.40)%
Diseases of the blood	2 (.20)%	4 (.30)%	6 (.50)%
Diseases of the liver & billiary system	1 (.10)%	0 (.00)%	1 (.10)%
Endocrine & metabolic diseases	4 (.30)%	1 (.10)%	5 (.40)%
Diseases due to infection	3 (.30)%	11 (.90)%	14 (1.20)%
Others diseases	48 (4.10)%	29 (2.50)%	77 (6.60)%
Total Reported Morbidity	429 (42.50)%	666 (57.50)%	1158 (100.00)%

On comparing morbidity with state of origin, the data shows that respondent from UP has highest level of t morbidity (12.8%), followed by respondent from Rajasthan (9.8%), Bihar (6.8%), Haryana (1.8 %) and Tamil Nadu (1.3 %) respectively (Table-4.7).

Table 4.7: Reported Morbidity by native Places

Reported Morbidity	Natives Place					
	U.P	Rajasthan	Bihar	Haryana	Tamil Nadu	Total
No Morbidity	359(31.0%)	241(20.8%)	121(10.4%)	56(4.8%)	17(1.5%)	794(68.6%)
Diseases of the respiratory system	8(.7%)	1(.1%)	0(.0%)	0(.0%)	2(.2%)	11(.9%)
Diseases of the digestive system	17(1.5%)	8(.7%)	4(.3%)	1(.1%)	0(.0%)	30(2.6%)
Diseases of the skin and sexually transmitted diseases	2(.2%)	5(.4%)	3(.3%)	0(.0%)	0(.0%)	10(.9%)
Pregnancy, child birth related	4(.3%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)	5(.4%)
Symptoms of the cold, cough & fever	73(6.3%)	53(5.6%)	36(3.1%)	6(.5%)	7(.6%)	175(15.1%)
Diseases of the connective tissues, joints & bones	6(.5%)	4(.3%)	6(.5%)	0(.0%)	1(.1%)	17(1.5%)
Injury & poisoning	4(.3%)	3(.3%)	1(.1%)	0(.0%)	0(.0%)	8(.7%)
Diseases of the cardiovascular system	3(.3%)	0(.0%)	1(.1%)	0(.0%)	1(.1%)	5(.4%)
Diseases of the blood	1(.1%)	3(.3%)	2(.2%)	0(.0%)	0(.0%)	6(.5%)
Diseases of the liver & billiary system	1(10%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
Endocrine & metabolic diseases	4(.3%)	0(.0%)	1(.1%)	0(.0%)	0(.0%)	5(.4%)
Diseases due to infection	8(.7%)	3(.3%)	2(.2%)	1(.1%)	0(.0%)	14(1.2%)
Others diseases	17(1.5%)	22(1.9%)	22(1.9%)	12(1.0%)	3(.3%)	77(6.6%)
Total	507(43.8%)	343(29.8%)	199(17.2%)	76(6.6%)	33(2.8%)	1158(100.0%)
Total Reported Morbidity	148 (12.8%)	102 (9.8%)	78 (6.8%)	20 (1.8%)	16 (1.3%)	364(32.4%)

Table-4.8 shows respondent who reported morbidity 22 % were non workers (Unemployed), 2.6 % were unskilled workers, 3.8 % were semi skilled workers, 1.2 % were skilled workers and 1.9 % owned some shop or did some interesting kind of business.

Table 4.8: Reported Morbidity by occupation

Reported Morbidity	Occupation						
	Non - workers	Unskilled	Semi skilled	Skilled	Highly skilled	shop owners	Total
No Morbidity	572(49.3%)	76(6.6%)	100(8.6%)	20(1.7%)	1(.1%)	26(2.2%)	794(68.6%)
Diseases of the respiratory system	9(.8%)	2(.2%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	11(.9%)
Diseases of the digestive system	22(1.9%)	2(.2%)	4(.3%)	1(.1%)	0(.0%)	1(.1%)	30(2.6%)
Diseases of the skin and sexually transmitted diseases	5(.4%)	1(.1%)	2(.2%)	1(.1%)	0(.0%)	1(.1%)	10(.9%)
Pregnancy, child birth related	3(.3%)	1(.1%)	1(.1%)	0(.0%)	0(.0%)	0(.0%)	5(.4%)
cold, cough & fever	136(11.7%)	10(.9%)	15(1.3%)	3(3.0%)	0(.0%)	11(.9%)	175(15.1%)
Diseases of the connective tissues, joints & bones	10(.9%)	0(.0%)	2(.2%)	3(.3%)	0(.0%)	2(.2%)	17(1.5%)
Injury & poisoning	4(.3%)	2(.2%)	2(.2%)	0(.0%)	0(.0%)	0(.0%)	8(.7%)
Diseases of the cardiovascular system	2(.2%)	3(.3%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	5(.4%)
Diseases of the blood	6(.5%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	6(.5%)
Diseases of the liver & billiary system	0(.0%)	1(.1%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
Endocrine & metabolic diseases	3(.3%)	1(.1%)	1(.1%)	0(.0%)	0(.0%)	0(.0%)	5(.4%)
Diseases due to infection	10(.9%)	1(.1%)	2(.2%)	0(.0%)	0(.0%)	1(.1%)	14(1.2%)
Others diseases	45(3.9%)	6(.5%)	15(1.3%)	6(.5%)	0(.0%)	5(.4%)	77(6.6%)
Total	827(71.3%)	106(9.2%)	144(12.4%)	34(2.9%)	1(.1%)	47(4.1%)	1158(100.0%)

As regard reported illness by with income of individuals, Table 4.9 shows that highest number of morbidity is reported from the income category of less than 5000 (6.3%), followed by the respondent from income group of 5000 to 10,000 rupees (3.3%) and 10,000 to 15000 rupees (0.1%). Those respondent who reported a higher morbidity were non working (22%) (Unemployed). The data clearly shows that the respondent from the lower income group of less than Rs. 5000 suffer / reports higher illness (except injury).

Table 4.9: Reported Morbidity by monthly income

Reported Morbidity	Income						
	Non workers	Less than 5000	5000 to 10000	10000 to 15000	15000 to 20000	20000+ (Above)	Total
No illness	572(49.4%)	158(13.6%)	59(5.1%)	3(.3%)	1(.1%)	1(.1%)	794(68.6)
Diseases of the respiratory system	9(.8%)	2(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	11(.9%)
Diseases of the digestive system	22(1.9%)	6(.5%)	2(.2%)	0(.0%)	0(.0%)	0(.0%)	30(2.6%)
Diseases of the skin and sexually transmitted diseases	5(.4%)	4(.3%)	1(.1%)	0(.0%)	0(.0%)	0(.0%)	10(.9%)
Pregnancy, child birth related	3(.3%)	2(.2%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	5(.4%)
Symptoms of the cold, cough & fever	136(11.7%)	22(1.9%)	16(1.4%)	1(.1%)	0(.0%)	0(.0%)	175(15.1%)
Diseases of the connective tissues, joints & bones	10(.9%)	6(.5%)	1(.1%)	0(.0%)	0(.0%)	0(.0%)	17(1.5%)
Injury & poisoning	4(.3%)	1(.1%)	3(.3%)	0(.0%)	0(.0%)	0(.0%)	8(.7%)
Diseases of the cardiovascular system	2(.2%)	3(.3%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	5(.4%)
Diseases of the blood	6(.5%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	6(.5%)
Diseases of the liver & billiary system	0(.0%)	1(.1%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
Endocrine & metabolic diseases	3(.3%)	2(20%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	5(.4%)
Diseases due to infection	10(.9%)	3(.3%)	1(.1%)	0(.0%)	0(.0%)	0(.0%)	14(1.2%)
Others diseases	45(3.9%)	20(1.7%)	12(1.0%)	0(.0%)	0(.0%)	0(.0%)	77(6.6%)
Total	827(71.4)	230(19.9%)	95(8.2%)	4(.3%)	1(.1%)	1(.1%)	1158(100.0%)
Total Reported Morbidity	255(22.0%)	72 (6.3%)	36 (3.3%)	1(.1%)	0(.0%)	0(.0%)	364 (32.4%)

Caste wise breakup shows, 27.1 % respondent who reports morbidity are SC, 3.8 % are OBC and 0.5 % was high caste (general). The reported morbidity is higher in the marginalized caste groups. Highest illness reported is cough and cold fever among SC (13%) followed by diseases of digestive system experience by 2.2% of respondents also SC (Table-4.10).

Table 4.10: Reported Morbidity by caste

Reported Morbidity	Caste			
	SC	OBC	General	Total
No Morbidity	694(59.9%)	95(8.2%)	5(.4%)	794(68.6%)
Diseases of the respiratory system	11(.9%)	0(.0%)	0(.0%)	11(.9%)
Diseases of the digestive system	25(2.2%)	4(.3%)	1(.1%)	30(2.6%)
Diseases of the skin and sexually transmitted diseases	8(.7%)	2(.2%)	0(.0%)	10(.9%)
Pregnancy, child birth related	5(.4%)	0(.0%)	0(.0%)	5(.4%)
cold, cough & fever	150(13.0%)	21(1.8%)	4(.3%)	175(15.1%)
Diseases of the connective tissues, joints & bones	13(1.1%)	4(.3%)	0(.0%)	17(1.5%)
Injury & poisoning	8(.7%)	0(.0%)	0(.0%)	8(.7%)
Diseases of the cardiovascular system	4(.3%)	1(.1%)	0(.0%)	5(.4%)
Diseases of the blood	6(.5%)	0(.0%)	0(.0%)	6(.5%)
Diseases of the liver & biliary system	1(.1%)	0(.0%)	0(.0%)	1(.1%)
Endocrine & metabolic diseases	4(.3%)	1(.1%)	0(.0%)	5(.4%)
Diseases due to infection	14(1.2%)	0(.0%)	0(.0%)	14(1.2%)
Others diseases	65(5.6%)	11(.9%)	1(.1%)	77(6.6%)
Total Reported Morbidity	1008(87.0%)	139(12.0%)	11(.9%)	1158(100.0%)

Table-4.11 shows the relationship between the reported morbidity and number of room in the house. Among those who reported morbidity, highest numbers of respondent i.e. 17.2 % lived in one room house followed by 10.5 % lived in two rooms, 2.4 % lived in three rooms, and 1.3 % lived in more than three room house respectively.

Table 4.11: Reported Morbidity by numbers of room

Reported Morbidity by No of rooms (household level)	Numbers of rooms				
	One rooms	Two rooms	Three rooms	Four rooms+	Total
No Morbidity	389(33.6%)	309(26.7%)	71(6.1%)	25(2.2%)	794(68.6%)
Diseases of the respiratory system	7(.6%)	3(.3%)	1(.1%)	0(.0%)	11(.9%)
Diseases of the digestive system	15(1.3%)	12(1.0%)	2(.2%)	1(.1%)	30(2.6%)
Diseases of the skin and sexually transmitted diseases	5(.4%)	5(.4%)	0(.0%)	0(.0%)	10(.9%)
Pregnancy, child birth related	2(.2%)	2(.2%)	0(.0%)	1(.1%)	5(.4%)
Symptoms of the cold, cough & fever	93(8.0%)	60(5.2%)	12(1.0%)	10(.9%)	175(15.1%)
Diseases of the connective tissues, joints & bones	12(1.0%)	4(.3%)	0(.0%)	1(.1%)	17(1.5%)
Injury & poisoning	6(.5%)	2(.2%)	0(.0%)	0(.0%)	8(.7%)
Diseases of the cardiovascular system	2(.2%)	2(.2%)	1(.1%)	0(.0%)	5(.4%)
Diseases of the blood	4(.3%)	2(.2%)	0(.0%)	0(.0%)	6(.5%)
Diseases of the liver & billiary system	1(.1%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
Endocrine & metabolic diseases	0(.0%)	4(.3%)	1(.1%)	0(.0%)	5(.4%)
Diseases due to infection	8(.7%)	4(.3%)	0(.0%)	2(.2%)	14(1.2%)
Others diseases	44(3.1%)	22(1.9%)	10(.9%)	1(.1%)	77(6.6%)
Total Reported Morbidity	588(50.8%)	431(37.2%)	98(8.5%)	41(3.5%)	1158(100.0%)

Examining the availability of kitchen or cooking space and the morbidity pattern, out of the respondent who reported illness, 6.2 % had separate kitchen inside the house, 22.1% had no separate space inside the house, While 3.2 % had kitchen outside the house (Table-4.12).

Table 4.12: Reported Morbidity by cooking space

Reported Morbidity	Cooking space			
	Inside house in separate kitchen	Inside house with no separate kitchen	Outside house	Total
No Morbidity	151(13.0%)	564(48.7%)	79(6.8%)	794(68.6%)
Diseases of the respiratory system	1(.1%)	9(.8%)	1(.1%)	11(.9%)
Diseases of the digestive system	1(.1%)	25(2.2%)	4(.3%)	30(2.6%)
Diseases of the skin and sexually transmitted diseases	5(.4%)	3(.3%)	2(.2%)	10(.9%)
Pregnancy, child birth related	0(.0%)	5(.4%)	0(.0%)	5(.4%)
Symptoms of the cold, cough & fever	32(2.8%)	131(11.3%)	12(1.0%)	175(15.1%)
Diseases of the connective tissues, joints & bones	4(.3%)	12(1.0%)	1(.1%)	17(1.5%)
Injury & poisoning	2(.2%)	5(.4%)	1(.1%)	8(.7%)
Diseases of the cardiovascular system	1(.1%)	3(.3%)	1(.1%)	5(.4%)
Diseases of the blood	1(.1%)	3(.3%)	2(.2%)	6(.5%)
Diseases of the liver & billiary system	0(.0%)	0(.0%)	1(.1%)	1(.1%)
Endocrine & metabolic diseases	1(.1%)	4(.3%)	0(.0%)	5(.4%)
Diseases due to infection	2(.2%)	12(1.0%)	0(.0%)	14(1.2%)
Others diseases	21(1.8%)	44(3.8%)	12(1.0%)	77(6.6%)
Total Reported Morbidity	222(19.2%)	820(70.8%)	116(10.0%)	1158(100.0%)

About 14 % of the individuals reported some form of substance abuse while 86 % did not use any substance. Out of 162 persons who reported substance use 78 persons used more than one kind of substance. 14 individuals used at least three kinds of substance and 3 individuals used at least four kinds of substance. Different kinds of substance used were bidi, cigarette, tobacco, alcohol, paan and gutka (Table-4.13).

Table 4.13: Substance use among individuals

Substance use	No of individuals	percent of individuals
No Substance use	996	86.0
At least one kind	84	7.3
At least two kinds	61	5.3
At least three kinds	14	1.2
At least four kinds	3	.3
Total	1158	100.0

It was reported that, 86.0 % respondents used no substances, only 14 % used substance, once, or twice or thrice in a day. It is interesting to find that out of 14% who use substance, 3.7 % individuals are from the income between Rs5000 to Rs 10000 and 2.2 % had income between Rs 10000 to Rs 15000 (Table-4.14).

When asked how much they spend on substance, out of 11 respondents said, they spend Rs 2000 or more, 2 % spend Rs 3000, 7 % of individuals spend hundred to five hundred rupees, 2.4 % of individuals spend Rs 500 to Rs 1000 and 2.2 % spend Rs 1000 to Rs 2000 on substances. 1.5 % individuals spend less than Rs 100.

Table 4.14: substance use frequency of individuals by incomes per month

Income per month	Substance use frequency					Total
	No substance use	At least one time	At least two times	At least three times	At least four times	
Less than 5000	803(69.3%)	16(1.4%)	6(.5%)	2(.2%)	0(.0%)	827(71.4%)
5000 to 10000	151(13.0%)	43(3.7%)	27(2.3%)	7(.6%)	2(.2%)	230(19.9%)
10000 to 15000	39(3.4%)	25(2.2%)	25(2.2%)	5(.4%)	1(.1%)	95(8.2%)
15000 to 20000	1(.1%)	0(.0%)	3(.3%)	0(.0%)	0(.0%)	4(.3%)
20000 to 25000	1(.1%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
25000 and Above	1(.1%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
Total	996(86.0%)	84(7.3%)	61(5.3%)	14(1.2%)	3(.3%)	1158(100.0%)

68.6% did not report any illness. Out of them 59.8% of the individuals who does not use any substance reported no illness. However, around 30% who reported illness falls under different diseases with different frequency of substance and does not show much of significance (Table-4.15).

Table 4.15: Reported Morbidity by substance use

Reported Morbidity	Substance use					
	No substance use	At least One time	At least two times	At least three times	At least four times	Total
No Morbidity	693(59.8%)	54(4.7%)	35(3.0%)	10(.9%)	2(.2%)	794(68.6%)
Diseases of the respiratory system	9(.8%)	2(.2%)	0(.0%)	0(.0%)	0(.0%)	11(.9%)
Diseases of the digestive system	27(2.3%)	1(.1%)	1(.1%)	0(.0%)	1(.1%)	30(2.6%)
Diseases of the skin and sexually transmitted diseases	9(.8%)	0(.0%)	1(.1%)	0(.0%)	0(.0%)	10(.9%)
Pregnancy, child birth related	3(.3%)	1(.1%)	0(.0%)	1(.1%)	0(.0%)	5(.4%)
Symptoms of the cold, cough & fever	157(13.6%)	11(.9%)	6(.5%)	1(.1%)	0(0%)	175(15.1%)
Diseases of the connective tissues, joints & bones	13(1.1%)	1(.1%)	3(.3%)	0(.0%)	0(.0%)	17(1.5%)
Injury & poisoning	4(.3%)	2(.2%)	2(.2%)	0(.0%)	0(.0%)	8(.7%)
Diseases of the cardiovascular system	4(.1%)	1(.1%)	0(.0%)	0(.0%)	0(.0%)	5(.4%)
Diseases of the blood	6(.5%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	6(.5%)
Diseases of the liver & biliary system	0(.0%)	1(.1%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
Endocrine & metabolic diseases	3(.3%)	1(.1%)	1(.1%)	0(.0%)	0(.0%)	5(.4%)
Diseases due to infection	13(1.1%)	1(.1%)	0(.0%)	0(.0%)	0(.0%)	14(1.2%)
Others diseases	55(4.7%)	8(.7%)	12(1.0%)	2(.2%)	0(.0%)	77(6.6%)
Total Reported Morbidity	303(26.2%)	30(2.6%)	26(2.3%)	4(.3%)	1(.1%)	364 (32.4%)
Total	996(86.0%)	84(7.3%)	61(5.3%)	14(1.2%)	3(.3%)	1158(100.0%)

About 8.3 % individuals use alcohol. Use of local liquor is slightly more than use of foreign brands. 4.8 % use local liquor and 3.5 % use foreign liquor (Table-4.16).

Table 4.16: Type of liquor expenditure of individuals by Incomes per month

Income per month	Type of liquor			
	No liquor use	Local/country	Foreign/branded	Total
Less than 5000	814(70.2%)	10(.9%)	3(.3%)	827(71.4%)
5000 to 10000	185(16.0%)	28(2.4%)	17(1.5%)	230(19.9%)
10000 to 15000	60(5.1%)	17(1.5%)	18(1.6%)	95(8.2%)
15000 to 20000	1(.1%)	1(.1%)	2(.2%)	4(.3%)
20000 to 250000	1(.1%)	0(.0%)	0(.0%)	1(.1%)
25000 and Above	1(.1%)	0(.0%)	0(.0%)	1(.1%)
Total	1062(91.7%)	56(4.8%)	40(3.5%)	1158(100.0%)

While comparing reported morbidity with consumption of liquor, it was found that 34 respondent out of 364 who reported morbidity consumed liquor. In all about 3% individuals who reported morbidity consumed liquor. The same number of individuals who had local liquor and foreign liquor had reported morbidity (17 individuals) (Table-4.17).

Table 4.17: Reported Morbidity by consumption of alcohol

Reported Morbidity	Type of Liquor				
	No Liquor	Local/coun try	Foreign/ branded	Not applicable	Total
No Morbidity	665(57.4%)	39(3.4%)	23(2.0%)	67(5.8%)	794(68.6)
Diseases of the respiratory system	10(.9%)	0(.0%)	0(.0%)	1(.1%)	11(.9%)
Diseases of the digestive system	27(2.1%)	1(.1%)	1(.1%)	1(.1%)	30(2.6%)
Diseases of the skin and sexually transmitted diseases	8(.7%)	0(.0%)	0(.0%)	2(.2%)	10(.9%)
Pregnancy, child birth related	3(.3%)	0(.0%)	1(.1%)	1(.1%)	5(.4%)
Symptoms of the cold, cough & fever	145(12.5%)	4(.3%)	5(.4%)	21(1.8%)	175(15.1%)
Diseases of the connective tissues, joints & bones	13(1.1%)	1(.1%)	2(.2%)	1(.1%)	17(1.5%)
Injury & poisoning	4(.3%)	1(.1%)	1(.1%)	2(.2%)	8(.7%)
Diseases of the cardiovascular system	2(.2%)	2(.2%)	0(.0%)	1(.1%)	5(.4%)
Diseases of the blood	5(.4%)	0(.0%)	0(.0%)	1(.1%)	6(.5%)
Diseases of the liver & billiary system	0(.0%)	0(.0%)	0(.0%)	1(.1%)	1(.1%)
Endocrine & metabolic diseases	3(.3%)	0(.0%)	1(.1%)	1(.1%)	5(.4%)
Diseases due to infection	12(1.0%)	0(.0%)	0(.0%)	2(.2%)	14(1.2%)
Others diseases	53(4.6%)	8(.7%)	6(.5%)	10(.9%)	77(6.6%)
Total Reported Morbidity	285 (24.6%)	17 (1.4%)	17 (1.5%)	45 (3.9%)	364 (32.4%)
Total	950(82.0%)	56(4.8%)	40(3.5%)	112(9.7%)	1158(100%)

It is understood that alcoholism leads to domestic violence. Maya's mother was a victim of domestic violence. On the night of her sister's wedding in their village, her father came home drunk. There was a fight and her father hit her mother on her head with a stone slab. Her mother had to get treatment for three months from a private doctor and therefore could not go to work for three months. Even her father had to miss work for a month and a half. They had to borrow money for getting treatment. Even now her mother has continuous pain in the head. Because they don't have money, she is not getting any treatment.

One lady during the interview says *Kusumpur pahari mein agar sharab na piye to unka khana hazam nahi hota. Ladai hoti hai tabhi to maza ata hai. Kabhi hum peet te hai kabhi woh peet jate hai* meaning In Kusumpur pahari if they do not drink alcohol they can't digest food. When a fight takes place only then there is fun. Sometimes we get beaten up, sometimes they beat us. However, the survey shows very few individuals consuming alcohol or substance abuse. The limitation of the survey is to hide such sensitive issues. The narrative given by the keyinformant however, shows a different picture, where it looks like every household, individuals consume alcohol.

There were also cases which show how large amount of money is spent on getting treatment for illnesses. There are also two cases of mentally ill patients who are not able to get care in Kusumpur Pahari.

Few cases of morbidity are given below

Sonia is 20 years old. Since she is eight years old, she has asthma. First they (family) went to a local quack for some days. After that she got treatment from Safdarjung for 2-3 months. After that she was admitted in Moti Bagh for eleven days. Her parents had to miss work for eleven days. Her father is a peon and mother is a domestic help. They had to spend Rs 9,000 for the treatment. After discharge, she was called to the hospital for next 4-5 days for giving her oxygen treatment. They spent Rs1500 on treatment. In April 2009 she was admitted in Bareilly City Hospital for five days. They had to spend Rs 10,000. Sonia feels dizzy after taking allopathic medicines. She has to take in inhaler and steam every day. Her parents had to borrow money, sell jewellery they had saved for their elder daughter's wedding and had to mortgage their house for arranging money for the treatment.

There are two cases of mental illness among respondents. They do not get proper attention. Puja is four years old. She is getting fits since she was one year old. She was admitted in Safdarjung for one and a half months for which her parents spent Rs 15,000. After that they went to a quack. They spent another Rs 2000 over there. She keeps to herself and does not speak to anyone. She does not ask for food or tell anyone about her toilet needs. Children do not want to play with her and call her mad. If she goes out she does not come back to the house. For this reason her family keeps her tied to a tree in the house as there is nobody to give full attention to look after her and everybody is busy with the livelihood. The other reason for tying up, is because when she goes out children starts hitting her.

Another case is of Sonu. He is seven years old. He mentally challenged. He gets scared very easily, and has problem of bedwetting. He was shown in Sadfdarjung where he got treatment for one month. For treatment his parents spent Rs 3000. After that they went to another government hospital where he got treatment for one week. For treatment his parents spent Rs 600.

IV.2 Mortality profile in Kusumpur Pahari

Cases of mortality of those respondents who have died in the last one year were collected. There was eight deaths in Kusumpur Pahari in the period of last one year. As regards deaths which have occurred among people in Kusumpur Pahari, it is reported that there was an infant death, another below ten years of age. Four deaths occurred among the elderly, those above 60 years. One of them has reached age 101 years. Of all those who died, two were males and 6 were females. The causes of mortality among the young are infection; there was one death due to respiratory infection (8 month old) and another due to parasitic infection (9 years old). Among the older the cause is cardiovascular disease (55 years), other non communicable disease (80 years) and also respiratory infection (62 years) and old age (101 years).) There was a single case of murder of a woman who had been stabbed allegedly by her husband for not meeting demand for dowry.

The morbidity profile in Kusumpur Pahari shows majority of respondents did not report any illness. This can be due to underreporting and trying to hide the diseases. The other reason may be they probably do not perceive their problem as illness. It was also found that minor ailments like cold, cough and fever are most commonly

reported. Diseases of the Digestive system, diseases of the connective tissues and joints, diseases due to infection were also reported. Many of these problems are related to poor living conditions. Other diseases like swelling, giddiness, fits, stone, head ache and ear discharge was also reported. More males than females report illness. Respiratory infection is reported more by women. This can be due to use of cooking fuels causing smoke. The highest number of morbidity was reported from the poorest income category of less than Rs 5000 income per month. Caste wise break up shows that the largest proportions of those who report illness are SC. More people who got sick live in one room household. Very few reported of substance abuse and alcohol consumption. This again requires qualitative study to know the behavioral patterns of individuals.

Chapter 5

Health Seeking Behavior and expenditure on health care

CHAPTER V

HEALTH SEEKING BEHAVIOR AND EXPENDITURE ON HEALTH CARE

Even though India spends almost 6 per cent of its GDP on health, public expenditure as a percentage of total health expenditure amounts to only 20 per cent. This is among the lowest in the world. Households account for almost 70 per cent of the total health expenditure, almost all of which is in the form of out-of-pocket spending. Given that good health is the most basic of all necessities; it puts a lot of burden on poor households. Such high levels of out-of-pocket spending by the households have certain adverse implications. While for some, access to health care is reduced considerably, others who opt for treatment face catastrophic burden of health care expenditures and are in consequent danger of becoming impoverished (Chowdhury,2009).The elaborate government health care system in Delhi, is mainly supposed to cater to those who are less privileged. However, the data revealed that this is more the exception than the rule. A greater percentage of high and middle-income households use government facilities and a greater percentage of lower income households use private facilities. There is a more than three times difference between expenditure in a private and a public facility, therefore the poor have to face bigger burden in health care expenses (Gupta and Dasgupta, 2000).

This section describes the different providers from whom residents of Kusumpur Pahari seek care and the expenditure on health care. It describes the socio-demographic profile of different providers like doctors, quacks, dais and Anganwadi workers and health care expenses by the respondents.

V.1 Health care providers

Providers in Kusumpur Pahari provide different services. These providers include doctors, quacks, dais, anganwari workers and NGOs workers. Some other key informants like community leaders and shopkeepers were also interviewed to discuss the health issues in Kusumpur Pahari.

Out of all the providers ages of the providers regard of the study between 26 years and 53 years. There were only two qualified providers, one of which was an MBBS and

the other one was BHMS. The BHMS doctor used to come in the Mobile Medical Van and the MBBS doctor through an NGO. He paid a visit to Kusumpur Pahari every three months, but he mostly prescribed medicines from outside. The rest of the providers were quacks and their education levels vary in between 12th to graduation. Two of them were OBC, one was general and the rest of them were SC (Table -5.1).

Table-5.1: Socio- economic profile of the providers

Providers (Doctors and Quack)	Age	Sex	Caste	Education qualification	No of patients treated in a day	Age group of patients	Fees charge
P1	34	Male	SC	12 th	20	20-30	30
P2	30	Male	SC	12 th	12	20-30	40
P3	37	Male	SC	12 th	15	20-30	40 (others charges 20 rupees)
P4	37	Male	OBC	B.S.C	15	Old age group	25
P5	37	Male	General	B.A	3(practices part time)	20-30	50(extra charges for syrup)
P6	26	Male	SC	12 th	15	10-60	40 (extra charges for syrup and injection)
P7	53	Female	OBC	BHMS	25	All age group	No fees or charges for medicine
P8	27	Male	SC	MBBS	200	All age group	120 (glass and eye drop)

Common illness in Kusumpur Pahari- All the providers reported fever, cough and cold as the most common illness in the area. Some other problems which were also reported in Kusumpur Pahari were loose motion and diarrhea (P2 and P4), viral fever (P3), allergies (P5) and injuries due to violence.

The common health problems reported among children were fever (P1, P2, and P7), pneumonia (P4), worms, and diarrhea (P7). Health problems among women include leucorrhoea (P4, P7), uterine prolapsed (P7) and weakness (P4). One of the providers gave services for abortion and pregnancy testing (P6). Health problems that youth commonly faced were fever (P1, P5, and P6), loose motion and food poisoning (P4), weakness and pain (P6) and skin problem (P7). Common health problems of elderly,

according to providers were knee ache and arthritis (P2, P4, and P7), fever (P1, P3, and P5), asthma and heart disease (P6), and high Blood Pressure (P7).

Problems in service delivery- The providers reported some problems during service delivery. One of the providers, who were a quack (P4), said that they were afraid of police raids. Two providers (P5 and P7) said that the patients came to them in drunken state and used abusive languages. Another problem was that they were asked to do home visits (P7).

One provider said (P4) that he had done B.Sc but wanted to study further. He could not study because he had financial problems. He said that rich used to get all the advantages and the poor were not able to get any education due to financial disadvantage. But the rich become rich due to the hard work of the poor – *jab dus gareeb kaam karte hain to ek ameer aram karta hai*. He had worked as a compounder with a qualified doctor for five years. After that he opened his clinic in Kusumpur Pahari. He said that *jab yehan pe koi kaam nahi tha to yehi karna pada*. He said that the government should train informal providers rather than closing down their shops. He also said that they provided first aid treatment to the people otherwise community will suffer. So they are serving the society.

Among the *dais*, all were above the age of 40 years. All of them belonged to Scheduled Caste and were illiterate. One dai was Christian and the rest were Hindus. Four dais had formal training, three from government hospital and one from government dispensary. One dai had not got any formal training, but had been trained by her mother in law. One dai had no formal or informal training (Table-5.2)

Table-5.2: Provider's (dai) Socio- economic profile and Training Received in Kusumpur Pahari

Providers (Dai)	Age	Caste	Religion	Education qualification	Received formal training/institutional training	Received training form family
D1	60	SC	Hindu	Nil	No	Mother –in-low
D2	50	SC	Hindu	Nil	Government hospital	No
D3	47	SC	Christian	Nil	Government dispensary	No
D4	50	SC	Hindu	Nil	No	No
D5	42	SC	Hindu	Nil	Government hospital	Mother
D6	48	SC	Hindu	Nil	Government hospital	Mother –in-low

Every block in Kusumpur Pahari has a dai who can also go to other blocks if need be. They charged about Rs 500 for delivery but if the family is very poor, then they could do it free of cost. Families sometimes gave sari or food etc to the dais later. They used to visit the family of the pregnant woman for conducting delivery. They also took the help of family members during delivery.

Birthing Practices of Dais

- a) **Cleaning of infant after birth-** All the dais said that after the birth of the infant they bathe the child and the mother. Only one *dai* said that she does massage of both the mother and child and applies kajal (D2).
- b) **Cutting of umbilical cord-** For cutting the umbilical all the dais said that they used blades which they had boiled in water before they used it. They had also boiled the thread with which they tied the umbilical cord. Four dais said that they boiled the blade and then cleaned it with dettol antiseptic before using it (D2, D3, D4, D5). Only one dai said that she used a pin for clipping the umbilical cord. Some dais said that they had a separate pot for boiling the blade and thread (D1, D3, and D4).
- c) **Disposal of umbilical cord-** For disposal of the umbilical cord, two dais said that they bury it in the ground (D1, D5). One dai said that they bury the umbilical cord if it is a baby boy, and throw it away if it is a girl (D2). For girls it had been thrown away because girls are believed to belong to another's family. Three dais said that they simply throw it away (D3, D4, D6).
- d) **Services provided after delivery-** One dai said that they visit the family of the baby for one month after birth (D1). Others said that they help the mother to practice feeding the baby (D2, D3, and D6). Some dais said that they give information to the family about immunization (D4, D5). All the dais said that they advice the mother what to eat. They advised them to have boiled water and not cold water. They also asked mothers not to have 'cold foods' for one month. The foods that they thought which makes the body cold were like rice, gourd and radish. They asked the mothers to have milk and dry fruits every day.
- e) **Identification of pregnancy and Referral-** Dais also helped in identifying pregnancy. Different dais used different ways of identifying pregnancy. Two dais said that they use pelvic examination (D2, D5), and examine the abdomen

(D4, D5, D6). Some identify it when a woman missed her period (D1) and vomiting (D3). All of them said that when there was a complication, they used to refer the woman to Safdarjung Hospital. They also said that they accompany the women in case of any complication.

There were six Anganwadi Workers (AWW) and one Anganwadi Helper who were interviewed. The AWW were in the age group of 25 to 45 and all of them were Hindus. Three belonged to OBC, 1 was SC and two were from higher caste. The Anganwadi helper was Hindu and SC. The AWW had education between 12th standard to post graduation, and the Anganwadi helper was illiterate (Table-5.3).

Table-5.3: Provider's (Anganwadi workers and helper) socio- economic profile in Kusumpur Pahari

Providers (Anganwadi workers)	Age	Religion	Caste	Education qualification
A1	35	Hindu	General	12 th
A2	38	Hindu	SC	B.A
A3	40	Hindu	OBC	Post Graduation
A4	40	Hindu	OBC	B.ed
A5	25	Hindu	General	B.A
A6	31	Hindu	OBC	B.A
A7*	45	Hindu	SC	Nil

Note * A7 is Anganwadi helper

The Anganwadis provide a number of services. Immunization of all children less than 6 years of age, immunization against tetanus for all the expectant mothers, supplementary nutrition to children below 6 years of age, supplementary nutrition to women who were pregnant and nursing, esp. from the low income group, weighing each child every month, recording the weight on the growth card and organizing non-formal pre-school activities in the Anganwadi of children in the age group 3-6 were the activities performed by all the AWW. Some of the activities were not done in all the Anganwadis. Nutrition, health education and health check-ups to all women in the age group of 15- 45 years was done by only three out of seven Anganwadis, antenatal care of expectant mothers was done by only two out of seven Anganwadis, postnatal care of nursing mothers was done by only one out of seven Anganwadis, referral of serious cases of malnutrition or illness to hospitals was done by only two out of seven Anganwadis, carrying out a quick survey of all the families, especially mothers and

children in those families in their respective area of work once in a year was done by only one out of seven Anganwadis (Table-5.4).

Food items that are provided were- 350 gms *khichdi*, 75gms *chana*, 250 gms cooked food, 50gms *panjiri*. Children in the age group of 0-6 years get 75gms snack and pregnant women get 350gms food. Other responsibilities of AWW were conducting Mahila Mandal meetings, getting the centre cleaned and arranging for drinking water in the Anganwadi centre.

Table-5.4: Service provided by Anganwadi workers and helper in last one year

Services provided in last one year	Yes	No	Total
Immunization of all children less than 6 years of age	7	0	7
Immunization against tetanus for all the expectant mothers	7	0	7
To assist ANM in the administration of IFA and Vitamin	7	0	7
Supplementary nutrition to children below 6 years of age	7	0	7
Supplementary nutrition to women who are pregnant and nursing, esp. from the low income group	7	0	7
Nutrition, health education and health check-ups to all women in the age group of 15- 45 years	3	4	7
Antenatal care of expectant mothers	2	5	7
Postnatal care of nursing mothers	1	6	7
To weigh each child every month, record the weight graphically on the growth card-	7	0	7
Referral of serious cases of malnutrition or illness to hospitals, upgraded PHCs/ Community Health Services or district hospitals	2	5	7
To organize non-formal pre-school activities in the Anganwadi of children in the age group 3-6	7	0	7
To carry out a quick survey of all the families, especially mothers and children in those families in their respective area of work once in a year	1	6	7

There were twenty five Anganwad is in Kusumpur Pahari out of which seven were interviewed. Only three out of seven AWW had got any training (A1, A5, A6). Other AWW who were not interviewed were illiterate. There were some Anganwadis which did not have an AWW. One AWW had to look after two to three Anganwadis. About 12

to 70 children visit the Anganwadis. Prayer, drawing and play were the activities conducted (Table-5.5).

Table 5.5: Preschool activities for Anganwadi workers and helper

Provider	Number of children who participate	Pre-school activities
A1	12	Prayers, Drawing
A2	30	Drawing
A3	35	Drawing
A4	35	Prayers, Drawing
A5	15	Drawing
A6	35	Prayers, Drawing
A7	70	Supplementary food, play, teaching, Prayers, Drawing

Note * A7 is Anganwadi helper

Through my personal observation was that the Anganwadis were not functioning in Kusumpur Pahari. The AWW did not come to the Anganwadi regularly. The helper used to come and gave the food. Many visits were made to the Anganwadi centre, but the AWW was not available. On the last day of the month all the AWW got together in one place with the supervisor. The supervisor had dictated what had to be written in the growth chart and the AWW followed the same. The supervisor did not want to cooperate and share any information with the researcher. She did not give the growth chart for photocopying. The supervisor gave only general information about a few AWW and told us to make up the information and fill up the form.

One helper said that many children did not come to the Anganwadi centre because the food was of poor quality. She also showed a box of medicines which was not distributed.

Responses from providers (NGOs)

Three NGO workers were interviewed. They provided different services in Kusumpur Pahari.

NGO1- Rotary Club's Women's Vocational Training Centre

Rotary club started working in Kusumpur Pahari in 1990. The NGO was run by a retired wing commander. They run a homeopathic dispensary, eye camps, and tuition classes and provide vocational training. They had recently started giving nutrition supplements to children. Biscuits were given every day and fruit and milk was given

once in a week. They also had a library for children. Health camps were conducted six times in a year. About 150 girls got vocational training and 150 children got education. They had six trainers, 4 teachers, 1 ayah and 4 administrative staff. They had women's self help groups which also provide microfinance.

NGO2- ASHA Trust

They started the work in 1988. They had a dispensary in Kusumpur Pahari. The dispensary was run by a qualified doctor with a registration fee of Rs 5. The medicines and tests were done free of cost. They also conducted healthcare camps, health counseling, and immunization services. Every week services were provided to about 75 persons and health counseling for 10 persons.

They also had Mahila Mandal and Bal Mandal. They gave health education to women in the Mahila Mandal. They held their meeting once in a week with children from Bal Mandal. Children up to 5th class were part of the Bal Mandal. Teaching and other activities were done with about 65 children and were also given supplementary nutrition.

They also help people to get loans from PNB and SBI for education and business purposes. According to the doctor, most common illnesses were Tuberculosis, asthma and pneumonia. They used to refer serious cases to Safdarjung. Women mostly faced Reproductive Tract Infections (RTI), children faced pneumonia and typhoid and among elderly common problems were cataract, aches and intestinal problems. They provided DOTS treatment to 19 TB patients of the area.

NGO3- Shanti Devi Charitable Trust

The NGO was working in Kusumpur Pahari since 1998. They provided no formal schooling to young children. Children were given snacks (biscuit and bananas). They also had a library for children. There were five computers in the centre to provide computer training. They also gave vocational counseling to youth.

According to people in Kusumpur Pahari, the NGO did not work much. Once a year some foreigners used to come to the slum and conducted programme by gathering children. Children were given snacks. They got pictures clicked and went back. In our own observation, one NGO worker got a phone call from the NGO head. She was asked to send 10-15 people from the community, properly dressed to a programme that was being held outside Kusumpur Pahari. (plate 9)

Responses from Key Informants in Kusumpur Pahadi

Key Informant 1- Chairman, Kusumpur Gaon Vikas Samiti

Key informant 1 was staying in Kusumpur Pahari for last 25 years. He was originally from Hathras, UP and had education upto 8th standard. According to him the main problem in Kusumpur Pahari was shortage of water. People did not get clean drinking water. The pump that provided water was 580 feet deep, but the water was not clean.

Another problem was lack of toilet facilities. According to Key Informant 1, only 2 percent people had toilets and there were only two Sulabh Toilets. But poor people did not go to these public toilets because they charged Rs2 per use. For this reason most people had to go to the open for defecation which caused problem for people, especially women. There had been cases of robbery, molestation and even rape.

Electricity was not a problem as there was regular power supply.

Health problems of people were asthma and blood sugar. According to Key informant 1 most people went to Moti bagh and Safdarjung Hospital for treatment. He said that the pulse polio scheme had helped people. Health cards had been made for people above 60 years of age. According to him the Anganwani facilities were not functioning properly. About 70-80 percent children went to school and SC children were given free school uniforms and books from the school. There was a plan by the Delhi Government to remove slum and evict people. But there was a lot of protest and opposition. After that it had been decided that DDA flats would be made in an area of 42.85 acre and would be allotted to all residents except those who had come after 31st March, 2007.

Key Informant-2 – Pradhan

In Kusumpur Pahari, the people themselves conducted elections after taking permission from the M.P and MLA. There was no formal election from the government's side in Kusumpur Pahari. The people voted and elected the pradhan. The police was also informed and helped them during the election. According to the Pradhan, there was no problem related to water as every day 20 MCD tankers used to come to Kusumpur Pahari and people got water from the bore well too. Sanitation was also not a problem as MCD sweepers used to clean the area every day. There were regular water supplies. Most people went for open defecation. Only those who had enough land had their own toilets made. There was no sewage pipe line in the

area. For health problems there was not ambulance facility and people went to Safdarjung Hospital for treatment. A homeopathic mobile van visited them once a week.

There were two schools, one was primary and other one was secondary. In the primary school money for uniform was provided but the amount was no fixed. Different families got different amounts.

Key Informant 3- President, Akhil Bhartiya Janwadi Mahila Samiti

Key Informant 3 came to Kusumpur Pahari 42 years ago from Burma as a refugee when Hindus were sent out of the country. They were given a place in Burma Colony in Faizabad. She moved to Kusumpur Pahari from there. According to the key Informant, shortage of water was a big problem in Kusumpur Pahari. Every day 20 tankers came in different blocks. But one block got a tanker only once in a week. Drinking water was not available. People used to buy 20 liters of water for Rs 5. The tubewell water was available every alternate day. There was no piped water and the tanker water was chlorinated.

Sanitation was not regular. Only when they put pressure on the corporation, then only there was cleanliness. Lack of sanitation also caused fights. (Only one *nalli* was there and when it got blocked people start fighting as there was no one to clean it regularly). The drains were cleaned once in five to six days. And those who were staying in the inside lanes had to face more problem as they were not cleaned by the sweepers. People had to clean it themselves. The Mahila Samiti also tried to put pressure on MCD to clean the drains.

Electricity was available twenty four hours a day. The government gave subsidy upto 200 units per month. If anyone had used more than 200 units of electricity then they did not get subsidy.

Lack of toilets led people to go for open defecation. People therefore had to face problem of robbery and even rape cases took place. She also said that the government was planning to make multi-storied flats in place of the slum.

Health problems according to her were tuberculosis (TB), fever and pneumonia. Mostly children were reporting TB. The mobile van used to come sometimes. Anganwadi centers were not functioning properly. Health camps were also conducted time to time. The AWW were from outside Kusumpur Pahari area and did not come

to the centre regularly. The helper mostly stayed in the centre and gave food to the children. Another problem was illegal liquor shops. The police were also hand in glove with the owners and passed the information about raids beforehand. Due to alcoholism there were fights among neighbor and domestic violence. Although there were government schools, they did not give good quality education. The fixed amount was not given for uniforms to the people and on protest; they were told that the full amount would be given the next time.

Key Informant 4- Shopkeeper

Key informant 4 had a shop in Kusumpur Pahari for last 11 years. He was not a resident of Kusumpur Pahari. According to him the schools and Anganwadi centers were not functioning properly. The AWW used to come only once or twice a month. Aches and pains were the most common health problems. The government health camps were held once 2-4 months.

V.2 Health Seeking as reported by Respondents

The residents of Kusumpur Pahari seek treatment from a whole range of providers including both qualified and unqualified providers, government and private providers.

As regards the treatment out of all the respondents, 16.7 percent got treatment it from quacks. For 5.8 percent source of treatment was government hospital, for 4.5 percent it was private clinic, 0.6 percent got treatment from private hospital, 0.4 percent did home remedy and only 0.3 percent went to government clinic (Table-5.6).

Table 5.6: Source of treatment by Individuals

Source of treatment	No of individuals	Percentage of individuals
No treatment/no illness	831	71.8
Government hospital	67	5.8
Government clinic	3	0.3
Private hospital	7	0.6
Private clinic	52	4.5
Home	5	0.4
Quack	193	16.7
Total	1158	100.0

For common problems like cold and fever, more than 11% people go to quacks (11.3%). In cases of disease related to connective tissues and joints (0.4%) and diseases due to infections (0.5%) most of the individuals preferred to go to quacks. In case of other diseases, injury and poisoning and diseases of the digestive system more respondents prefer to go to qualified provider (Table-5.7).

Table 5.7: Reported Morbidity by Source of treatment

Reported Morbidity by source of treatment	Source of treatment							Total
	No treatment	Government hospital	Government clinic	Private hospital	Private clinic	Home	Quack	
No illness	768(66.3%)	7(.6%)	1(.1%)	0(.0%)	7(.6%)	1(.1%)	11(.9%)	794(68.6)
Diseases of the respiratory system	4(.3%)	2(.2%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	5(.4%)	11(.9%)
Diseases of the digestive system	7(.6%)	7(.6%)	0(.0%)	2(.2%)	5(.4%)	2(.2%)	7(.6%)	30(2.6%)
Diseases of the skin & sexually transmitted diseases	3(.3%)	3(.3%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	4(.3%)	10(.9%)
Pregnancy, child birth related	2(.2%)	1(.1%)	0(.0%)	0(.0%)	2(.2%)	0(.0%)	0(.0%)	5(.4%)
Symptoms of the cold, cough & fever	20(1.7%)	7(.6%)	0(.0%)	1(.1%)	15(1.3%)	1(.1%)	131(11.3%)	175(15.1%)
Diseases of the connective tissues, joints & bones	6(.5%)	1(.1%)	1(.1%)	0(.0%)	3(.3%)	1(.1%)	5(.4%)	17(1.5%)
Injury & poisoning	1(.1%)	4(.3%)	0(.0%)	1(.1%)	2(.2%)	0(.0%)	0(.0%)	8(.7%)
Diseases of the cardiovascular system	0(.0%)	2(.2%)	0(.0%)	0(.0%)	3(.3%)	0(.0%)	0(.0%)	5(.4%)
Diseases of the blood	4(.3%)	0(.0%)	1(.1%)	1(.1%)	0(.0%)	0(.0%)	0(.0%)	6(.5%)
Diseases of the liver & biliary system	0(.0%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)	0(.0%)	0(.0%)	1(.1%)
Endocrine & metabolic diseases	0(.0%)	1(.1%)	0(.0%)	0(.0%)	2(.2%)	0(.0%)	2(.2%)	5(.4%)
Diseases due to infection	5(.4%)	1(.1%)	0(.0%)	0(.0%)	2(.2%)	0(.0%)	6(.5%)	14(1.2%)
Others diseases	14(1.2%)	28(2.4%)	1(.1%)	2(.2%)	10(.9%)	1(.1%)	21(1.8%)	77(6.6%)
Total	831(71.8%)	67(5.8%)	3(.3%)	7(.6%)	52(4.5%)	5(.4%)	193(16.7%)	1158(100.0%)
Total reported morbidity	63 (5.5%)	60 (5.2%)	2 (.2%)	7 (.6%)	45(3.9%)	4(.3%)	182 (15.8%)	364 (32.4%)

Most people went to quack (16.7 percent) for treatment, followed by government hospital (5.8 percent), private clinic (4.5 percent), private hospital (0.6 percent), home treatment (0.4 percent) and government clinic (0.3 percent). In all income categories most individuals preferred to go to quacks to seek treatment (Table-5.8).

Table -5.8: Source of treatment by Income per month

Income per month	Source of treatment							
	No treatment	Government hospital	Government clinic	Private hospital	Private clinic	Home	Quack	Total
Less than 5000	594(51.3%)	45(3.9%)	3(.3%)	3(.3%)	36(3.1%)	5(.4%)	141(12.2%)	827(71.4%)
5000 to 10000	166(14.3%)	14(1.2%)	0(.0%)	2(.2%)	15(1.3%)	0(.0%)	33(2.8%)	230(19.9%)
1000 to 15000	65(5.6%)	8(.7%)	0(.0%)	2(.2%)	1(.1%)	0(.0%)	19(1.6%)	95(8.2%)
15000 to 20000	4(.3%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	4(.3%)
2000 to 25000	1(.1%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
25000 to above	1(.1%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
Total	831(71.3%)	67(5.8%)	3(.3%)	7(.6%)	54(4.5%)	5(.4%)	193(16.7%)	1158(100.0%)

Note* this table includes responses of the same individuals who has been to more than one place for treatment.

Out of all the respondents, 16.7 percent got treatment from quacks, 6 percent from government doctors, 4.7 percent from private medical practitioners, 0.4 percent did home remedy, 0.1 percent got treatment at from Ayurved Vaidya and Government nurses (Table-5.9).

Table -5.9: Treatment providers by individuals

Treatment providers	No of individuals	Percent of individuals
No treatment/no illness	834	72.0
Private medical practitioner	54	4.7
Ayurved Vaidya	1	.1
Home treatment	5	.4
Quack(not formal training in medicine)	194	16.8
Government Doctor	69	6.0
Government nurse	1	.1
Total	1158	100.0

Most people went to quack (16.8 percent) for treatment, followed by government Doctors (6.0 percent) and private medical practitioners (4.5 percent). Very few individuals had home treatment (0.4 percent) or went to Ayurved vaidya (0.1 percent) and Government Nurse (0.1 percent) (Table-5.10).

Table 5.10: Treatment provider by Incomes per month

Income per month	Treatment provider							Total
	No treatment	Private medical practitioner	Ayurved vaidya	Home treatment	Quack	Government doctor	Government Nurse	
Less than 5000	593(51.2%)	37(3.2%)	1(.1%)	5(.4%)	142(12.3%)	48(4.1%)	1(.1%)	827(71.4%)
5000 to 10000	171(14.8%)	14(1.2%)	0(0.0%)	0(0.0%)	33(2.8%)	12(1.0%)	0(0.0%)	230(19.9%)
1000 to 15000	65(5.6%)	3(.3%)	0(0.0%)	0(0.0%)	18(1.6%)	9(.8%)	0(0.0%)	95(8.2%)
15000 to 20000	3(.3%)	0(0.0%)	0(0.0%)	0(0.0%)	1(.1%)	0(0.0%)	0(0.0%)	4(.3%)
2000 to 25000	1(.1%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	1(.1%)
25000 to above	1(.1%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	1(.1%)
Total	834(72.0%)	54(4.5%)	1(.1%)	5(.4%)	194(16.8%)	69(6.0%)	1(.1%)	1158(100.0%)

As seen in the above table for source of treatment, similar pattern can be seen for provider. For common problem like symptoms of cold and fever most people go to quacks (11.3%). In cases of disease related to connective tissues and joints and diseases due to infections also more individuals preferred to go to quacks. In case of other diseases, injury and poisoning and diseases of the digestive system more respondents prefer to go to qualified provider (Table-5.11).

Table 5.11: Reported Morbidity by treatment providers

Reported Morbidity by Treatment providers	Treatment providers							Total
	No treatment	Private medical practitioner	Ayurved Vaidya	Home treatment	Quack(not formal training in medicine)	Government Doctor	Government Nurse	
No illness	771(66.6%)	4(.3%)	0(.0%)	0(.0%)	12(1.0%)	6(.5%)	1(.0%)	794(68.6)
Diseases of the respiratory system	4(.3%)	0(.0%)	0(.0%)	0(.0%)	5(.4%)	2(.2%)	0(.0%)	11(.9%)
Diseases of the digestive system	8(.7%)	6(.5%)	0(.0%)	1(.1%)	8(.7%)	7(.6%)	0(.0%)	30(2.6%)
Diseases of the skin and sexually transmitted diseases	3(.3%)	0(.0%)	0(.0%)	0(.0%)	4(.3%)	3(.3%)	0(.0%)	10(.9%)
Pregnancy, child birth related	2(.2%)	2(.2%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)	0(.0%)	5(.4%)
Symptoms of the cold, cough & fever	21(1.8%)	13(1.1%)	0(.0%)	2(.2%)	131(11.3%)	8(.7%)	0(.0%)	175(15.1%)
Diseases of the connective tissues, joints & bones	5(.4%)	4(.3%)	0(.0%)	1(.0%)	5(.4%)	2(.2%)	0(.0%)	17(1.5%)
Injury & poisoning	1(.1%)	3(.3%)	0(.0%)	0(.0%)	0(.0%)	4(.0%)	0(.0%)	8(.7%)
Diseases of the cardiovascular system	1(.1%)	2(.2%)	0(.0%)	0(.0%)	1(.1%)	1(.1%)	0(.0%)	5(.4%)
Diseases of the blood	0(.0%)	2(.2%)	1(.1%)	0(.0%)	1(.1%)	2(.2%)	0(.0%)	6(.5%)
Diseases of the liver & billiary system	0(.0%)	1(.1%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
Endocrine & metabolic diseases	0(.0%)	2(.2%)	0(.0%)	0(.0%)	2(.2%)	1(.1%)	0(.0%)	5(.4%)
Diseases due to infection	5(.4%)	2(.2%)	0(.0%)	0(.0%)	6(.5%)	1(.1%)	0(.0%)	14(1.2%)
Others diseases	13(1.1%)	13(1.1%)	0(.0%)	1(.1%)	19(1.6%)	31(2.7%)	0(.0%)	77(6.6%)
Total	834(72.0%)	54(4.7%)	1(.1%)	5(.5%)	194(16.8%)	69(6.0%)	1(.1%)	1158(100.0%)

V.3 Household Expenditure on Health Care

This chapter deals with the expenditure by respondents to seek healthcare in last one year. It also includes loss of wages due to illness and sources from which money was borrowed to meet health expenses. Problem faced due to health related illness is illustrated with case studies.

Most individuals incurred expenses less than 500 rupees (9.80 percent) on their treatment. 5.40 percent incurred expenses between 500 to 1000 rupees, 4.50 percent incurred expenses between Rs.1000 to Rs. 5000 rupees, and 1.90 percent incurred expenses between Rs.5000 to Rs.10000 rupees, 0.50 percent incurred expenses between 1000 to 15000 rupees, 0.30 percent incurred expenses between Rs. 15000 to Rs. 20000 rupees, 0.30 percent incurred expenses between Rs. 20000 to Rs. 25000 and 0.90 percent incurred expenses above Rs. 25000 on their treatment (Table-5.12).

Table 5.12: Expenses incurred in rupees by individuals

Expenses incurred Rs	No of individuals	Percentage of individuals
No Expenses incurred	883	76.30
Less than 500	114	9.80
500 to 1000	63	5.40
1000 to 5000	52	4.50
5000 to 10000	22	1.90
10000 to 15000	6	0.50
15000 to 20000	3	0.30
20000 to 25000	4	0.30
Above 25000	11	0.90
Total	1158	100.00

Case Study- Kartari Devi (60 years): Elderly Women

One day I was returning home from work. I was carrying a sack of wheat flour on my head. Suddenly it started raining heavily. I took shelter under a tree for two hours and then left for home. It was still drizzling. I started feeling cold, even though it was summer. When I reached home, I saw that the drain was blocked and my house was filled with dirty water. My daughter was not well; she had swelling in the body, so I had to clean up myself. When I started cleaning, I started sweating heavily. My daughter

asked me to stop as I was not feeling well. I told her that the house was full of dirty water and would stop after cleaning up. I asked her to heat water and prepare tea so that I could have it after bath. But after taking bath, I had very high fever and a lot of difficulty in breathing. I could not understand what was happening to me. Next day morning I had tea and started going to work. My daughter asked me not to go as I was not well, but I told her how would they manage, they would be having a wedding and I could make some extra money. So I went for work, but had to come back after half a day because I was not feeling well. Then my son took me to a private doctor in Vasant Kunj. The doctor asked if he had got money with him. My son said he did not have much money, but since his mother was not well he would go home and get money. He got money from home. The doctor told us that it was respiratory problem. It would take some time, but if I took medicines I would be alright. He gave medicine worth Rs 500 for four days and prescribed some Rs 150 worth medicine which we had to buy from outside. There was not much improvement and because the doctor was expensive we could not continue treatment. Then we went to a local (unqualified doctor) in Kusumpur Pahari. But his medicines also did not work. One day's medicine cost Rs 100 and I spent Rs 7000. After that I went to another private doctor. The doctor told me that it was breathing problem (asthma) and even after taking medicines, I would continue to have some problem. When I heard this I started crying, because I was completely well and did not know what had gone wrong with me. The doctor told me that this disease will end with your death, but I should not worry. After that I started getting treatment from the mobile van. I got some relief from their medicine. They had asked me not to eat oily food, cold water from fridge, rice, radish and carrot. After that I got herbal medicine from Adesh Nagar. Although the medicine was good, it was very expensive so I could not continue treatment for long. Only travel would cost Rs 300 and one month medicine would cost Rs 200. After that I went to the government hospital in Moti Bagh but I had to do a lot of running about. I had to climb stairs and I could not climb. They had admitted me and wrote medicines which I had to buy from outside. All my money had got over and because of my treatment, a lot of problems aroused at home. My work and my children's work started to suffer. My children had to take leave to take me to the doctor and because of that their boss would get angry. Then one day I suddenly fell ill

and had to be admitted in Holy Angel Hospital. For only 1.5 hour of admission, I had to spend Rs 5000. Next time when I got admitted I again spent Rs 5000 and was put on oxygen. But due to reaction of medicines, I had boils all over my body. Till date I had spent about Rs 50,000 only on medicines excluding transport. I had problem in sieving flour, climbing stairs, dusting and washing clothes in winters.

In all 23.7 percent individuals had to spend money to get treatment for their illness. 198 out of 827(23.94 percent) individuals who earn less than 5000 rupees had to spend money out of their own pocket for treatment of their illness. Similarly 48 out of 230 (20.8 percent) individuals in the income rang of 5000 to 10000 rupees, 28 out of 95(29.47 percent) individuals earning 10000 to 15000 rupees and 1 out of 6 individuals earning more than rupees 15000 had to spend money on their treatment (Table-5.13).

Table 5.13: Morbidity expenditure by income per month

Income per month	Morbidity expenditure									
	No Illness	Less than 500	500 to 1000	1000 to 5000	5000 to 10000	10000 to 15000	15000 to 20000	20000 to 25000	25000 & Above	Total
Less than 5000	629(54.3%)	84(7.3%)	50(4.3%)	34(2.9%)	15(1.3%)	3(.3%)	3(.3%)	3(.3%)	6(.5%)	827(71.4%)
5000 to 10000	182(15.7%)	18(1.6%)	8(.7%)	10(.9%)	5(.4%)	2(.2%)	0(.0%)	1(.1%)	4(.3%)	230(19.9%)
10000 to 15000	67(5.8%)	11(.9%)	5(.4%)	8(.7%)	2(.2%)	1(.1%)	0(.0%)	0(.0%)	1(.1%)	95(8.2%)
15000 to 20000	3(.3%)	1(.1%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	4(.3%)
2000 to 25000	1(.1%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
25000 to above	1(.1%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
Total	883(76.3%)	114(9.8%)	63(5.4%)	52(4.5%)	22(1.9%)	6(.5%)	3(.3%)	4(.3%)	11(.9%)	1158(100.0%)

Very high out of pocket expenditure can be seen from the table above. Out of 198 individuals earning less than Rs 5000, who had to spend money on their treatment, 30 individuals had to spend Rs 5000 or more on it. This means 15.15 percent of those who spent money on their treatment had to spend amount equal to or more than their monthly

income. Since their income was already very low (less than Rs 5000), it was a lot of burden for such persons.

Upto Rs 5000 expenditure, main illness for which expense was incurred was cold and fever followed by other diseases and problem of digestive system. In cases where more than Rs 5000 was spent, it can be observed that the other diseases were the main reason for expenses.

4.5 percent respondents lost less than ten days of work due to illness. 0.7 percent respondents lost 10 to 30 days of work, 0.20 percent respondents lost more than 30 days of work due to illness (Table-5.14).

Table 5.14: Number of days of work loss due to illness (only for worker) by individual level

Number of days of work loss due to illness (only for worker)	No of days	Percent of days
No work loss	1096	94.60
Less than 10 days	52	4.50
10 to 30 days	8	0.70
30 Above	2	0.20
Total	1158	100.00

Case study one

Shyamwati (45 years) had an accident and broke her left leg. She was taken to Safdarjung. After that she was taken to Dehradun for treatment. She was getting treatment for several months. Not only did she have to lose her work, because of her treatment, her husband could not get to work for 5- 6 months. Both of them were sweepers. On the day of the interview, she was again hit by a motorcycle, on the same leg and could not go to work.

Case study Two

Manish who was 19 year old, met with a major accident some months back? He fell from a moving bus and was severely injured. He broke his leg and was admitted in Safdarjung hospital where he got treatment for six months. His treatment cost about Rs 1.5 lakh. To arrange for the money, they had to borrow from their relatives and sold off their land. They had filed a case and were able to get 80,000 as compensation.

Case study Three

Vijendra was 35 years old. He worked as a sweeper of the municipal corporation. He had slipped and fractured his leg in his home during the rainy season. He went to a private doctor in old Delhi where he spent Rs 8000. He had to borrow money from his friend and for three months he could not go to work. He did go to the government hospital because there are long queues and it took a lot of time.

There were 4.5 percent individuals lost less than 10 work days due to illness, 0.7 percent lost 10 to 30 work days and 0.2 percent lost 30 or more work days due to illness. 31 individuals earning less than 5000 rupees and 13 individuals earning 5000 to 10000 rupees lost work due to illness (Table-5.15).

Table 5.15: Number of work days lost due to illness

Income per month	Number of work days lost due to illness (only for workers)				
	No loss of work	Less than 10 days	10 to 30 days	30 & above	Total
Less than 5000	796(68.7%)	29(2.5%)	2(.2%)	0(.0%)	827(71.4%)
5000 to 10000	217(18.7%)	11(.9%)	1(.1%)	1(.1%)	230(19.9%)
10000 to 15000	77(6.6%)	12(1.0%)	5(1.6%)	1(.1%)	95(8.2%)
15000 to 20000	4(.3%)	0(.0%)	0(.0%)	0(.0%)	4(.3%)
20000 to 250000	1(.1%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
25000 and Above	1(.1%)	0(.0%)	0(.0%)	0(.0%)	1(.1%)
Total	1096(94.6%)	52(4.5%)	8(.7%)	2(.2%)	1158(100.0%)

Symptoms of cold and fever were the main reason for not being able to go to work for short duration of less than ten days. 1.9 percent individuals could not go to work for up to ten days because of it. For longer days of not going to work, other diseases and injury are the main cause. 0.3 percent individuals could not get to work for 10-30 days due to other illnesses and one individual could not go to the work for more than 30 days due to accident/injury.

4.8 percent individuals mortgaged assets to pay for treatment. 3.8 percent took loan from neighbors, 1.9 percent took loan from relatives and 0.5 took loan from friends. 14.2 percent use their own saving to get treatment (Table-5.16).

Table 5.16: Source of money if borrowed for treatment

Source of money if borrowed for treatment	No of individuals	Percentage of individuals
No Source of money if borrowed for treatment	886	74.8
Mortgaged assets	56	4.8
Took loan from neighbor	44	3.8
Took loan From relatives	22	1.9
Took loan Friends	6	0.5
Own saving	164	14.2
Total	1158	100.00

Most of the individuals (14.2 percent) spent money out of their own saving for treatment. 4.8 percent Mortgaged assets, 3.8 percent borrowed money from neighbor, 1.9 percent borrowed money from relatives and 0.5 percent borrowed money from friends for their treatment (Table-5.17).

Table 5.17: Source of money borrowed for treatment by income per month

Income per month	Source of money if borrowed for treatment						
	No treatment	Mortgaged assets	Took loan from neighbors	Took loan From relatives	Took loan Friend	Own savings	Total
Less than 5000	619(53.5%)	28(2.4%)	30(2.6%)	15(1.3%)	4(.3%)	131(11.3%)	827(71.4%)
5000 to 10000	178(15.4%)	17(1.5%)	11(.9%)	4(.3%)	1(.1%)	19(1.6%)	230(19.9%)
10000 to 15000	64(5.5%)	10(.9%)	3(.3%)	3(.3%)	1(.1%)	14(1.2%)	95(8.2%)
15000 to 20000	3(.3%)	1(.1%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	4(.3%)
20000 to 25000	1(.1%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	1(.1%)
25000 and Above	1(.1%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	1(.1%)
Total	866(74.8%)	56(4.8%)	44(3.8%)	22(1.9%)	6(.5%)	164(14.2%)	1158(100.0%)

Among the individuals who mortgaged assets, it is seen that even for common cold symptoms and fever 2.3 percent had to mortgage assets. Assets were also mortgaged for diseases (0.1%) of cardiovascular system. Symptoms of cold and fever and problems of the digestive system were the two main reasons for taking loan (Table-5.18).

Table 5.18: Reported Morbidity by Source of money if borrowed for treatment

Reported Morbidity by Source of money if borrowed for treatment	Source of money if borrowed for treatment						Total
	No Source of money if borrowed for treatment	Mortgaged assets	Took loan from neighbors'	Took loan From relatives	Took loan from Friends	Own savings	
No illness	779(67.3%)	13(1.1%)	0(0.0%)	0(0.0%)	0(0.0%)	2(0.2%)	794(68.6)
Diseases of the respiratory system	4(0.8%)	0(0.0%)	2(0.2%)	1(0.1%)	2(0.2%)	2(0.2%)	11(0.9%)
Diseases of the digestive system	12(1.0%)	2(0.2%)	5(0.4%)	0(0.0%)	0(0.0%)	11(0.9%)	30(2.6%)
Diseases of the skin and sexually transmitted diseases	5(0.4%)	0(0.0%)	1(0.1%)	3(0.3%)	0(0.0%)	1(0.1%)	10(0.9%)
Pregnancy, child birth related	2(0.2%)	1(0.1%)	2(0.2%)	0(0.0%)	0(0.0%)	0(0.0%)	5(0.4%)
Symptoms of the cold, cough & fever	24(2.1%)	27(2.3%)	8(0.7%)	3(0.3%)	2(0.2%)	111(9.6%)	175(15.1%)
Diseases of the connective tissues, joints & bones	9(0.8%)	2(0.2%)	1(0.1%)	1(0.1%)	0(0.0%)	4(0.3%)	17(1.5%)
Injury & poisoning	1(0.1%)	0(0.0%)	2(0.2%)	2(0.2%)	0(0.0%)	3(0.3%)	8(0.7%)
Diseases of the cardiovascular system	1(0.1%)	1(0.1%)	2(0.2%)	1(0.1%)	0(0.0%)	0(0.0%)	5(0.4%)
Diseases of the blood	1(0.1%)	0(0.0%)	1(0.1%)	3(0.3%)	0(0.0%)	1(0.1%)	6(0.5%)
Diseases of the liver & billiary system	0(0.0%)	0(0.0%)	0(0.0%)	1(0.1%)	0(0.0%)	0(0.0%)	1(0.1%)
Endocrine & metabolic diseases	1(0.1%)	0(0.0%)	3(0.3%)	0(0.0%)	0(0.0%)	1(0.1%)	5(0.4%)
Diseases due to infection	6(0.5%)	0(0.0%)	3(0.3%)	0(0.0%)	0(0.0%)	5(0.4%)	14(1.2%)
Others diseases	21(1.8%)	10(0.9%)	14(1.2%)	7(0.6%)	2(0.2%)	23(2.0%)	77(6.6%)
Total	866(74.8%)	56(4.8%)	44(3.8%)	22(1.9%)	6(0.5%)	164(14.2%)	1158(100.0%)

Kusumpur Pahari has a number of providers, from whom residents seek care. Most of the respondents visit quacks, when they have an illness, followed by government hospital and private clinic. People prefer to go to quacks because they are more easily available, and charge less money. Some of the quacks also visit the house of patients, in case there is an illness. For going to government providers patients have to go far and it takes a lot of time to get treatment in government hospitals; and the qualified private providers charge high fees. For these reasons residents of Kusumpur Pahari prefer quacks. People from all income categories prefer to go to the quack. There are Anganwadi Centers, but they do not function well. The Anganwadi worker comes only once in a month and even the food that is provided is of poor quality. So children and pregnant women are not able to get proper nutrition supplement. There are several NGOs working in Kusumpur Pahari, but according to respondents, none of these work well. Most of the child birth is conducted by dais in Kusumpur Pahari. Most of the dais who were interviewed had received training. Women prefer to give birth at home because it is cheaper and more convenient. Even to go to hospital, they have to spend money on travel, and they need a relative to stay with them in the hospital. Therefore residents in Kusumpur Pahari have poor access to healthcare facilities, and government facilities are not functioning well. Residents of Kusumpur Pahari also had to spend money out of their pocket for treatment. Although most people spent less than Rs 500 on treatment, many respondents also had to spend between Rs 5000 to 25000 and therefore had to spend more money than their income. Most respondents met expenses through their own savings, but almost five percent respondents had to mortgage assets. Respondents also borrowed money from neighbors and relatives. Along with cost of illness, they also have to suffer due to loss of work and wages.

Chapter 6

Discussion and Conclusion

CHAPTER-VI

DISCUSSION AND CONCLUSION

Urbanization has been growing in the last fifty years not only in India but all over the world. India's urban population is about 30 % which is less than other developed countries. In India the share of urban population as total population is small but it has been increasing. From only 17.3 % in 1951, share of urban population has grown to 31.2 % in 2011. Decadal growth of urban population has come down. In 1951 it was 41.4 % but in 2011 it was 31.8 %. Overall there has been increase in urbanization in India, but it has been more in big cities like Delhi. .

The main cause of this increasing migration to cities is due to different 'push' and 'pull' factors. Push factors are those factors because of which a person is forced to leave his place of origin. Many people are forced to migrate because there is shortage of work, or lack of education facilities or other facilities. Sometimes natural disasters force people to move out of a place. Pull factors are those factors which cause persons to migrate to a place. These are better employment opportunity, better amenities, better education facilities or family networks in that place. Big cities attract many migrants due to pull factors like availability of work. Due to lack of employment opportunity in rural areas, large numbers of people have to move to cities as migrant workers.

The life of a migrant worker is very difficult. When migrant workers come to cities, they have nowhere to go. Housing in the city is too expensive for them. As a result they live in squatters and slums in overcrowded conditions with poor sanitation and lack of basic amenities. The jobs are also low paying and with no job security. All these conditions create stress which causes lifestyle modification like alcoholism and results in non communicable diseases. The constant stress and overcrowding also result in small crimes and injuries among slum dwellers. Unhygienic conditions in the slum, lack of basic amenities like clean drinking water and toilets cause water-borne, oral-fecal and

other infectious diseases. Due to lack of access to health facilities and education, these people remain in poverty. Migration therefore becomes like a cobweb. From 1961-1971 to 1991-2001 volume of net migration has increase a lot. In 1961-1971 it was 633000 and in 1991-2001 it increased to 1600000 (R G I, 2011).

Slums started spreading in the 1960s along with the industrial developments. The two main reasons for creation of slums are unplanned migration of rural population to metropolitan city and unbalanced economic developments in the country. The high demand and price of land is also another reason for illegal settlements. The two most commonly found slums in India are dilapidated or unmaintained buildings and Squatters. The dilapidated or unmaintained buildings emerge as a result of rent control and tenant protection laws because of which the owners get no benefit to make repairs. Municipal taxes increased but the rent proceeds did not. Squatters emerge as a result of forceful encroachment of government and private vacant land unfit for human settlements like river banks, drainage canals and marginal railway lands, swamps, road sides, under bridges and even in public parks. An operational definition by UN defines slums as communities characterized by insecure residential status, poor structural quality of housing, overcrowding, and inadequate access to safe water, sanitation, and other infrastructure (United Nations Human Settlements Program, 2003 cit in NFHS3, 2005-06). In India the census uses different criteria for defining slum. These include compact area of at least 300 populations or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities (NFHS3-2005-06).

In India some slums are notified slums. These are legal slums and they should get civic services from municipal bodies. The non notified slums do not get any facilities from municipal body. They mostly have temporary migrant workers or new rural migrants. (Gupta et al, 2009)

Urbanization and migration has caused increase in slum population and urban poverty. Recent newspaper articles quote that there has been a growth of 17.8 million in urban slum population of the country in the last decade. The Pranob Sen Committee estimates that the projected slum population in the country for the year 2011 would be 93.06

million from the 75.26 million estimated in 2001 (The Economic Times, September 2010).) Only 640 out of 5161 urban areas have reported slums. In other world only 12.7 % of total Indian towns have reported slum (Kumar et al, 2007). Indian states like Meghalaya and Haryana have very high %age of slum population. In these states 30-40 % of urban population is living in slums. In Delhi about 20 % urban population was living in slum according to 2001 data (Census 2001 cit in Chandrashekhar, 2005).

Slum life is characterized by many physical, economic, legal, political and social problems. The physical living conditions are very poor. Slum dwellers live in small overcrowded tenements with poor access to safe and adequate drinking water, unhygienic conditions and lack of basic facilities like toilets. The economic life is also full of difficulties. Most people have very low income, low job opportunities, irregular employment and little opportunity to increase their skill. Politically they are vulnerable because as migrants do not have documents and cannot vote. Legally they are in a vulnerable situation because mostly they stay in slums that have not been recognized and there is no security of tenure (Singh, 2009). Because there is no security of tenure and they can be evicted any time by the government for 'beautification' or 'development' work in the city. In Delhi slums are unplanned settlements that have been categorized as Unauthorized colonies, regularized unauthorized colonies, urban villages, rural villages, Jhuggi jhopdi clusters (JJ clusters), notified slum areas and JJ resettlement colonies (Ahmad and Choi,2011).

Data from 28th, 46th, 52nd Rounds shows that there has been an increasing trend in reported morbidity. Incidence of infectious diseases like TB and water borne diseases like diarrhea and dysentery are very high. Female morbidity is higher than male morbidity. NSSO_60th Round data shows that on comparing all India urban and rural PAP with Delhi's urban and rural PAP we find that Delhi has lower reported morbidity than India. Urban PAP is 99 for all India and 72 in Delhi, while rural PAP is 88 for all India and 69 in Delhi (GoI, 2004). In slums of Delhi it was found that among chronic ailments the largest % was reported for TB at 62.5 % followed by 11.4 per cent asthma. Among acute illnesses vector borne diseases were the most commonly reported. The maximum incidence of reported illness was in the slums of Delhi's west zone at 5.4 per

a region seriously lacking in garbage handling facilities and cleanliness (CGDR, 2011). This shows the link between living conditions and morbidity.

Access to healthcare and other welfare services also affects health status. In India there is still poor access to basic services like immunization, Ante Natal Care, skilled assistance at delivery, post natal care and supplementary food at Anganwadi Centres. NFHS 3 data shows that in India 73.5 % children who are covered by AWC do not received supplementary food. In Delhi 12.4 % of children under age six years in areas covered by an *Anganwadi* centre (AWC) received any service from an AWC in the 12 months preceding the survey. Poor functioning of AWC means that children unable to get supplementary nutrition and this affect their nutrition status. NFHS-3 data for under nutrition of children in Delhi shows that 43 % of children under age five are stunted. This means that they are too short for their age, which indicates that they have been undernourished for some time. 17 % children in Delhi are wasted, or too thin for their height. This may result from inadequate recent food intake or a present illness. 25 % are underweight, which takes into account both chronic and acute under nutrition. Even during the first six months of life, when most babies are breastfed, 11 % of children are stunted, 35 recent are wasted, and 23 % are underweight. NFHS-3 (2005-06) (a). Women in slums also have poor nutritional status. Twenty one % of women in slums have low weight for height compared to 14 % women in non slum area. Women also have a very high prevalence of anemia.

Low nutrition status of women and high prevalence of anemia is risky for their life and health during pregnancy. It is important for them to have Ante natal check up, assisted child birth and post natal care. But many women do not have access to maternal health services. 67.5 % women in urban area and 28.9 % women in rural areas have delivery in a health institution. In urban areas 73.5 % women were assisted in their delivery by health personnel where as only 37.5 % women in rural area got assistance in delivery from health personnel. In Delhi only 58.9 % women delivered in a health facility and 63.5 % women were attended by skilled personnel for delivery.

For treatment of illness people go to different providers. One study done in slums in different zones of Delhi found that for seeking healthcare largest number (67.4 %) went to a government health facility followed by private OPD (18.7 %), private doctor (9.8 %) and chemist shop (4.1 %) (CGDR, 2011). But for many people the first option is the local *jholachhap* who is most accessible. Many poor including those living in slums do not seek treatment for their illness. Among the poorest in urban areas financial reason (45.11 %) is the most important reason for not seeking medical treatment followed by ailment not being considered serious (32.89 %). Among the richest Quintile in urban area only 7.53 % do not seek treatment due to financial reason. (NSS 60th round in Mukherjee and Karmakar, 2008).

The poor also have to bear the burden of high Out of Pocket Expenditure (OOP). India has one of the highest out of pocket expenditure for health care in the world. In urban areas poorest have the highest % of expenditure on health on outpatient at around 30 %. The highest class spends around 15 to 16 % in outpatient care. The richest people spend more on inpatient care possibly because they can afford private and corporate hospitals. (Baru et al, 2010).

This study was done among urban poor of Delhi slum Kusumpur Pahari, South Delhi to examine morbidity patterns and health care access. Kusumpur Pahari is a slum settlement which has developed due to migrant workers from different states like Uttar Pradesh, Bihar, Rajasthan, Tamil Nadu and Haryana. Majority of the household are from SC followed by OBC. Similar to the earlier studies done and the national data, the individuals living in Kusumpur Pahari live in small overcrowded one room houses, poor access to safe and adequate drinking water, unhygienic conditions and lack of basic facilities like toilets. Most of them being illiterate and primary educated lack skill and employment in organized sector. Most of them do labour work in unorganized sectors and go for daily wage work, except for few who have regular income. The economic life is also full of difficulties. Thus most people have very low income, low job opportunities, irregular employment and little opportunity to increase their skill.

The living conditions in the slum are very poor which affects the health of the slum dwellers. The main problem in Kusumpur Pahari is regular supply of clean water.

Though the key informants said the water supply is regular from tankers and enough, but the respondents reported there is overcrowding and fights over the water and have to store the water for days together. This causes many problems for the residents of Kusumpur Pahari. It also affects their health. Majority of households in Kusumpur Pahari live in overcrowded conditions with no space for toilets or separate space for kitchen. Though there are community toilets which are made in one block but the residents have to pay for it so they are under used and far away for people to access. So most of them go for open defecation and women in the process face sexual assault and harassment.

There is also no proper drainage facility. Water logging in drains is common and is also cause for fights. Many households cook in the open in front of the open drain. Shortage of water and poor living conditions in the slum affects sanitation and hygiene causes health problems.

A large number of respondents (68.6 %) reported no illness at the time of interview. This can be because the respondent does not want to report thus under reporting. There can be recall problems and the survey method could only bring out the current data. Of all the respondents, 25.3 % reported major illnesses and 6.1 % reported minor illness. The most commonly reported illness was cold, cough and fever, which was reported by 15.10 % respondents; this was followed by 'other' illness⁶ (6.60 %) and diseases of the digestive system (2.60 %). About 1.50 % reported diseases of the connective tissues, joints & bones and 1.20 % reported diseases due to infection. Infectious diseases like viral fever, TB and diarrhea can be linked to overcrowded condition and lack of clean drinking water. Other common problems like pain in the abdomen, body ache and joint pain can also be linked to life in Kusumpur Pahari. A big reason for this was that women had to carry 40 litre can of water. Lifting heavy weight was the reason behind this problem. Since there is no tapped water, and water supply is not regular, women have to store large amount of water. This is causing aches and pains. Alcoholism is another problem in Kusumpur Pahari which is leading to lot of domestic violence. There is also

⁶ Other illnesses include swelling, giddiness, fits, stone (gall bladder and kidney), headache, ear discharge, dental problem, eye problem

need for mental health services. In another study it was found that pneumonia and bronchitis were common among infant in households using wood or kerosene as fuel in Kusumpur Pahari (Sharma et al, 1995).

In case of health problem, households are not able to access proper treatment. In case of health problems, households first prefer going to quack. Largest proportion of respondents reported going to quacks for treatment (16.7 %), followed by government hospital (5.8 %) and private clinics (4.5 %). Very few people reported going to government clinic (0.3%) and private hospital (0.6 %) This is because quacks are more accessible as there is many such providers close by in Kusumpur Pahari. Even though they can get free treatment in government hospital, they prefer local providers because it takes a whole day to get treatment in government hospital. They have to miss their work and lose their wages. They also have to spend extra money on travel. Even in government hospital they have to spend money from out of their pocket to buy medicines. So they prefer unqualified provider rather than government hospital. Some individuals are not able to get any outside treatment because they don't have enough money. Even after going to government hospital with complication, pregnant women did not get treatment which led to two stillborn cases. Even other government facilities as shown in the literature like Anganwadi which are important to provide supplementary nutrition and health checkup for children and pregnant women are not functioning. Even though government schemes are there for the poor, they do not function properly.

It was found that the respondents were spending huge amount of money for each illness episode, especially from the household which have income less than 5000 or between 5000-10000. In cases major illness and in some cases of accidents, they had to spend thousands of rupees and they had to resort to borrowing or selling their assets. Even though world class tertiary cares public and private hospitals are present in the vicinity. Private tertiary care hospitals are supposed to treat 25% patients from poor family free of cost. None of them mentioned any private corporate tertiary care hospital. Even though few of them go to Safdurjung, huge amount is spent out of pocket.

Thus proper and free healthcare is not available, households also have to spend large out of pocket expenditure on healthcare. Some families have spent more than their income on their treatment. The poorest families are spending the largest amount on treatment. Since most persons are working in informal sector, they also have to lose wages if they fall ill. Although the government has said that residents of Kusumpur Pahari will get government flats, it will only be given to those families who settled there before 31st March 2007. Many households, who have settled after March 2007, feel that they have an uncertain future. They feel that if the settlements are demolished, they have nowhere to go. They feel that they are trapped in poverty because even if they want to come out are not getting opportunity for good education. Even though the government will give houses, many families will be evicted. They will again go to some other place and again a slum will be created. So the problem will continue. Even those who get a house, will not have proper income, so all their problem will not be solved.

The lives in slum as this study show is very miserable and laced with lots of problems and lack of resources and opportunities. Inspire of having public resources meant for poor slum dweller, like water, electricity, education and health care, the provisioning is not adequate and puts huge burden on the family further impoverishing them with no scope of coming out of the cycle of poverty.

The Delhi state has to take care of proper provisioning of resources, adequate safe water supply and drainage facilities and health care accessibility. Overcrowding at tertiary care push them to quacks, primary and secondary level care at the vicinity needs to be strengthened.

The study has its own limitations. Due to lack of time, in-depth probing was not possible on issues of illness and there was no scope for field observations and knowing their experiences thoroughly. There is a scope for a more detailed analysis and longer field work to understand their health problems and eliminate underreporting and any other biases.

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Appendix

APPENDIX – I

Schedule

I. General information

101. Name of Respondent -

102. Address of the Respondent-

103. Caste-

104- Sub caste-

105. Religion-

Caste: SC-1, ST-2, OBC-3, Other- 99

Religion: Hindu-1, Muslim-2, Christian-3, Sikh-4, Buddhist-5, Jain-6, Parsi-7, Others-99

Id. code	Caste	Sub caste	Religion	Age	Sex	Relationship with Respondent	Age at marriage	Educational qualification Attained
	103	104	105	106	107	108	109	110

Sex- Male-1, Female2

II. Migration pattern

111. When did you come to Kusumpur Pahadi?

112. From where did you come to Kusumpur Pahadi?

113. Why did you leave that place?

114. Why did you come to Kusumpur Pahadi?

III. Quality of Housing and living condition

A. Building material

115. Type of floor

Mud- 1

Plastered -2

Mosaic- 3

Tiles-4

Other- 99

116. Type of roof

Thached-1

Tin-2

Asbestos-3

Concrete-4

Other-99

117. No of rooms

118. Ventilation

Window is there - Yes - 1

No- 2

119. House Ownership - Own- 1

Rented-2

Govt. Provided-3

120. If rented amount in Rupees

121. Cooking Space

Inside House in Separate Kitchen- 1

Inside House with NO separate kitchen- 2

Outside House- 3

122. Bathing Space- Yes-1

No-2

IV. Occupation and income of the household

ID Code	123. Occupation (verbatim)	124. Income (Monthly)	125. Any other Source of Income	126. Remark

V. Basic amenities and social facilities

V. a Water

Source of water supply 126	Duration of supply (in minutes) 127	Distance to the source of water 128 (in minutes)	Purpose of Water use 129

Source of Water Supply 126- Public tap -1, Tap in House- 2, Public tube well-3, Hand pump-3, Tanker- 5, Other-99

Purpose of Water use 129- Drinking-1, Washing Clothes-2, Cleaning-3, Other-99

130. Is the water supply enough for your daily needs – Yes-1

No-2

131. If no, how do you supplement the unmet need of water?

132. What are the problems faced in collecting water?

133. How many members of the household have to collect water?

Male-1

Female-2

134. How much time in one day is spent in collecting water (In minutes)?

V b. Electricity Supply

135. Electricity Available in the Household Yes/No	136. Duration of supply in Hours	137. Average monthly bill (In Rupees)

Electricity Available- Yes (legal connection)-1, No- 2, Yes but no meter connection -3, Other-99

138. What Consumer Goods and other items do you own?

--

Television-1, Cooler-2, Fan-3, Boiler (Immersion rod)-4, Iron-5, Computer-6, Lap top-7, Refrigerator-8, Washing machine-9, Room Heater -10, Mixer -11, Mobile Phone- 12, VCD/DVD Player- 13, Land line phone- 14, Motor Cycle-15, Scooter-16, Car/four wheeler-17, Cycle-18, Cable Connection-19, Dish Antenna-20, Newspaper-21, Radio-22, Others -99

139. If Television owned

139 Numbers of TV	140 Colored (yes-1, No-2)	141 Black and White (yes-1, No-2)	142 Flat screen (yes-1, No-2)

V c. Cooking

143. Cooking Fuel used mainly

LPG (Gas) - 1

Electric Heater- 2

Kerosene oil- 3

Fire wood- 4

Others- 99

144. Additional cooking fuel used

LPG (Gas) - 1

Electric Heater- 2

Kerosene oil- 3

Fire wood- 4

Others- 99

145. Monthly Expenditure on Cooking Fuel –

V d. Toilet Facilities and drainage

146. Where do you go for urination?

Toilet at home -1

Public toilet-2

In the open- 3

Any Other- 99

147. Where do you go for Defecation?

Latrine at home -1

Public laterine-2

Open defecation – 3

Other- 99

148. If latrine at home, is there flush

Yes -1

No- 2

Not Applicable (no toilet at home) - 3

149. If flush is there, then is water available in the flush

Yes -1

No- 2

Not Applicable (no flush) - 3

150. What is the cost (in rupees) of using public facility for?

a. Urinal	<input type="text"/>
b. latrine	<input type="text"/>
c. washing clothes	<input type="text"/>
d. bathing	<input type="text"/>

151. How many times in a day do you use public facility for?

a- Urination	<input type="text"/>
b- Defecation	<input type="text"/>
c- Washing clothes	<input type="text"/>
d. Not applicable	<input type="text"/>

Not Applicable-88

152. Is drainage open or close?

Open-1

Close-2

153. Dose the road get clogged with drain water?

Yes -1

No- 2

Not Applicable – 88

154. When?

155. What is done to clean the drain water?

156. What type of approach road is there to the house?

Lane-1

Constructed path-2

Others-99

VI. Substance use

Id. code	157. Substance used	158. Frequency	159. Average Monthly Expenditure
	1		

157. What substance do you use – Tobacco-1, Cigarette-2, Bidi-3, Paan-4, Gutka-5, Liquor (drink)-6, Pan masala-7, Other-99

158. What is frequency of substance use- Daily-1, weekly-2, and monthly-3?

160. If you have liquor, what kind?

Local/country-1 foreign/branded-2 not applicable- 88

Any other information-

163. Source of Treatment: Government Hospital-1; Government Clinic-2, Private Hospital-3; Private Clinic-4; Home-5; Quack-6 (Not formal training in medicine), others (specify)-99

164. Treatment Provider:

Private	Public
Private medical practitioner-1	Government Doctor-8
Pharmacist-2	Government Nurse -9
Unani hakim -3	Government and private both-10
Ayurved Vaidya -4	Government Health Visitor/ASHA-11
Homeopath doctor-5	
NGO health worker-5	Other-99 (Specify)
Home treatment-6	
Quack-7 (Not formal training in medicine)	
Faith Healer (jhaar phoonk) -8,	

168. Source of money if borrowed of money for treatment: Sold assets: (land/jewelery/house etc)-1, Mortgaged assets-2, Took loan-3, From relatives-4, friends-5, RSBY scheme-6, **Janani Suraksha Yojna (JSY)**-7, **Janani-Shishu Suraksha Karyakram (JSSK)**-8, Own savings-9, Stree shakti Progamme(Power of Women)-10, Others-99

A-Morbidity experiences in detail(Narrative, case study, Life course analysis)

B-Medical casts and problems faced

VII b. Mortality

169. Has there been any death in the household in the past one year - Yes-1

No- 2

If yes, Please give details

Name of the deceased	Age of the time of death 170.	Sex Male-1 Female-2 171.	Causes of death 172.	Place of treatment in case of illness Prior to death 173.	Treatment provider 174.	Cost of Treatment 175.	Source of Money for Treatment 176.

Code: 172. Causes of death:

Communicable, Maternal, Prenatal & Nutritional Conditions	Non-Communicable Diseases	Injuries	Symptoms, Signs & Ill Defined Conditions
Tuberculosis-1	Malignant and other neoplasm's-11	Unintentional injuries : Motor Vehicle Accidents-21	Senility-26
HIV/AIDS-2	Diabetes mellitus-12	Unintentional injuries : Other-22	Ill- defined/ All other symptoms, signs and abnormal clinical and laboratory findings-27
Diarrheal diseases-3	Neuro-psychiatric conditions-13	Intentional injuries : Suicide-23	Murder-28
Malaria-4	Cardiovascular diseases-14	Intentional injuries : Other-24	Kidney Problem-29
Other infectious and parasitic diseases-5	Respiratory diseases-15	Injuries of undetermined intent-25	
Respiratory infections-6	Digestive diseases-16		
Maternal conditions-7	Genito-urinary diseases-17		
Perinatal conditions-8	Musculoskeletal diseases-18		
Nutritional deficiencies-9	Congenital anomalies-19		
Fever of unknown origin-10	Other Non-communicable diseases-20		

Source-Office of the registrar general, India Ministry of Home affairs, New Delhi

173. Place of treatment in case of illness prior to death: : Government Hospital-1; Government Clinic-2, Private Hospital-3; Private Clinic-4; Home-5; Quack-6 (Not formal training in medicine), Traditional (unani, hakim, local vaidya etc.)-7, others (specify)-99

174. Treatment Provider:

Private	Public
Private medical practitioner-1	Government Doctor-8
Pharmacist-2	Government Nurse -9
Unani hakim -3	Government and private both-10
Ayurved Vaidya -4	Government Health Visitor/ASHA-11
Homeopath doctor-5	
NGO health worker-5	Other-99 (Specify)
Home treatment-6	
Quack-7 (Not formal training in medicine)	
Faith Healer (jhaar phoonk) -8,	

176. Source of money for treatment: Sold assets: (land/jewelery/house etc)-1, Mortgaged assets-2, Took loan-3, From relatives-4, friends-5, RSBY scheme-6, **Janani**

Suraksha Yojna (JSY)-7, Janani-Shishu Suraksha Karyakram (JSSK)-8, Own savings-9, Stree shakti Progamme(Power of Women)-10, Others-99.

- a- Experiences in seeking treatment
- b- Impact of the death on the family

Remarks and observation:

APPENDIX - II

PHOTOGRAPHS

Plate 1: Women Waiting in Queue for Water Tanker in Ksumpur Pahari



Plate 2: Women filling Water from Hand pump



Plate 3: Collecting Water from Delhi Jal Board Tanker



Plate 4: Filling Unclean Water From a Tap to Meet Daily Needs

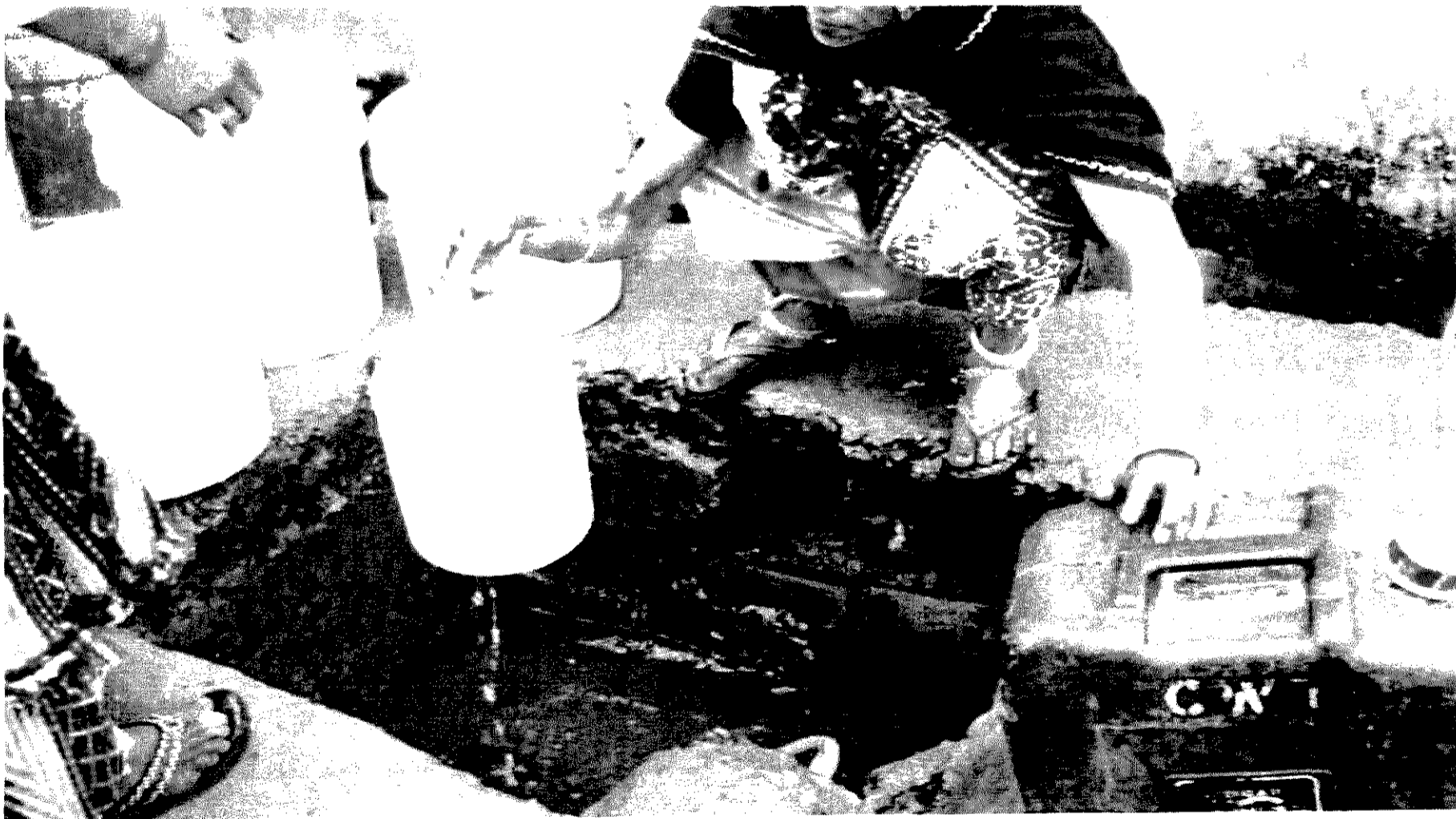


Plate 5: Containers Kept to Fill Water From Tap Near Open Drain.



Plate 6: Garbage Dump in Kujumpur Pahari



Plate 7: Lack of Sanitation in the Slum



Plate 8: Playground for Children



Plate 9 : Dispensary Run by Charitable Trust



Plate 10: Place for Dumping Garbage



Plate 11: Public Toilet



Plate 12: Public Toilet

