



ISSN: 0975-833X

## RESEARCH ARTICLE

### REDISCOVERING THE SLUMS: A CASE STUDY OF INDIRA CAMP NO. 5 IN VIKASPURI, WEST DELHI, INDIA

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#### ARTICLE INFO

##### Article History:

Received 15<sup>th</sup> September, 2015  
Received in revised form  
20<sup>th</sup> October, 2015  
Accepted 27<sup>th</sup> November, 2015  
Published online 30<sup>th</sup> December, 2015

##### Key words:

Slums,  
Socio-economic profile,  
Environment,  
Sanitation,  
Health,  
MDGs sustainable development.

#### ABSTRACT

India is among the fastest growing countries with many metropolitan cities (e.g. Delhi, Mumbai, Chennai, Pune etc.). During last two-three decades more and more people migrated from rural areas to the metropolitan cities in India. Increased the urban populations enhanced the pressure on urban eco-system and eco-services. There are many urban issues and challenges and abysmal state of sanitation in the country is big critical problem. Sustainable development presents one of the most significant service delivery challenges related to sustainable sanitation and healthy life to people. Government of India implemented Swachh Bharat Abhiyan to fight with sanitation. Among all the metropolitan cities, Delhi being most preferred destination by migrants and around 49 per cent of total population lives in slums. The thrust of this research paper is to investigate the socio-economic and environmental conditions of the Indira Camp, slum in Vikaspuri in west Delhi. The research paper summarises and analyses the findings from empirical field survey of few randomly selected persons within the study area by the use of open ended questionnaire, direct observation, housing demographic variables including socio-economic profile, source of water supply and environmental aspects. The finding clearly depicts the area as a typical slum environment by nature. Overall socio – economic and environmental conditions are poor and this particular area need immediate action on the part of government for their inclusive development in order to maintain urban sustainability.

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**Citation: Pooja Yadav and Subhash Anand, 2015.** “Rediscovering the slums: A case study of Indira Camp No. 5 in Vikaspuri, West Delhi, India”, *International Journal of Current Research*, 7, (12), 24498-24503.

## INTRODUCTION

A vision for cities has never been important than it is today. More than 30 per cent of population of India lives in cities and this trend is expected to continue. India expected to double the number of city dwellers by adding 404 million new people to cities over the next 35 years (Daniel, 2015). India is the 2<sup>nd</sup> largest population giant in the world with population 1.21 billion in 2011 (Census of India, 2011) and of this, about 37.11 million people or 31.2% of the total population reside in the urban areas. India is not alone in this challenge of course; Mexico, Brazil and Africa have some of the largest slums in the world. The biggest challenge today India and other developing countries facing is of rapid urbanization. An estimated 160 million people have moved to the cities in the last two decades, and another 230 million are projected to move there within the next 20 years (McKinsey, 2010). It is not surprising to say that India's infrastructure is famously poorly built. However the level of infrastructure and services in urban centres has lagged behind the pace of urbanization.

In response, the ill-equipped urban systems and the informal housing that are the slums have expanded exponentially in the last few decades without proper access to basic services such as sanitation, healthcare, education, law and order. It is unclear that there are simple solutions to the problem of slums given their extraordinary organic growth rates – 70% of the world's population is expected to live in urban centres by 2050 (UN, 2013).

The eight Millennium Development Goals (MDGs) cover a spectrum of issues, from poverty and hunger to education, child survival and maternal health, gender equality, combating HIV/AIDS and building a global partnership for development. As per the MDG, aims to have achieved a significant improvement in the lives of at least 100 million slum dwellers by 2020. This is also known as the 'Cities without Slums' initiative (UNICEF, 2012). The continuous flow of population towards the urban centres has strained India's urban system towards point of breaking and creation of slums with poor basic amenities. Thus, slums are a clear manifestation of a poorly planned and unmanaged urban sector and, in particular, a malfunctioning housing sector. A slum, for the purpose of Census, has been defined as residential areas where dwellings

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are unfit for human habitation by reasons of dilapidation, overcrowding, faulty arrangements and design of such buildings, narrowness or faulty arrangement of street, lack of ventilation, light, or sanitation facilities or any combination of these factors which are detrimental to the safety and health (Census of India, 2011). The research paper attempted to understand the state of environment of Indira Camp, in Vikaspuri, west Delhi. The main objectives of the research paper are to get an insight of socio-economic aspects along with to analyse the environmental status including the sanitation problem and health issues due to poor and unhygienic environment of the study area.

### Statement of Problem

It is here, in the burgeoning cities of the developing world, that the real challenge lies. Paradox lies in the fact that in spite of unrewarding city life, a false perception and hope of better life still prevails among the immigrants. There are many such instances where they are continued to be deceived. In 2011, 31 per cent lived in the urban areas and one in every six person lives in slum. In India, total number of towns reported slums are 2613 and in Delhi slum reported town are 22 according to Census in India, 2011. In Delhi, total population living in slum is 17, 85, 390 persons. All over the world the challenge of living on a 'planet of slums' is being addressed by a number of organizations trying to assist slum dwellers find a way out of poverty and vulnerability.

The quality of environment has not improved; instead it is deteriorating. On the contrary, despite solemn conference resolutions, they are actually disappearing. Slums are areas of concentrated disadvantages, availability of poor basic amenities including poor housing, unhygienic environment, and no job security many further making the people vulnerable towards the unsustainable livelihood. The hardship of the slum dwellers is likely to increase further in the context of the 21<sup>st</sup> century's globalization. This will increase the already highly varied skyline of the Indian city where multi-storeyed affluence is mostly surrounded by the oceans of poverty (Banerjee and Das, 2013).

In the study area Indira camp 5, it was observed lack of access to clean water, inadequate sanitation, poor waste disposal, and indoor air pollution and overcrowding in housing, are the major determinants of environmental health conditions of the slum dwellers Area with unplanned housing with poor ventilation, congested, overcrowded and lack of basic services and infrastructure and their locations near to 'nalla' make it prone to many health issues. About half of the slum dwellers use open spaces for sanitation. The women and children get exposed to serious health hazards due to mismanagement of water and solid waste. Overall socio-economic and environmental condition are very low which needs urgent and sustainable development.

### Study Area

Situated on the banks of the river Yamuna, the National Capital Territory of Delhi sprawls over 1,483 sq. km. and it is bounded in the north, south and west by Sonipat, Gurgaon, Faridabad and Jhajjar district of Haryana respectively and on

the east by river Yamuna that forms the boundary with Meerut and Ghaziabad district of Uttar Pradesh. The N.C.T. of Delhi at the time of census 2001 is comprised of 9 districts with 3 tehsils in each district. These 9 districts are Central, New Delhi, East, West, North, North-East, South, North-West and South-West. Indira camps, all *JJ cluster* located in the Vikaspuri, west district, Delhi. Indira camp number 5, famous slum dwelling of Vikaspuri is located in west district of N.C.T. and fondly referred to as *Jhuggi* cluster. Its coordinates are 28°38'27"North 77°4'6"East located near the resettled colony named as 'Hastsal', in west district of union territory Delhi, near Nangloi Jat area. Nawada is nearby village occupied by Yadav community and Najafgarh drain flowing in front of the study area. As per the head of locality (Pradhan) of the study area the population ranges from 3300-3500.

Through the lights from a door leading to a dimly-lit narrow room, you see a woman intently blowing hand fan. Beyond the room, whose walls are covered with newspapers and pictures of pantheons of Hindu gods and slabs on which her utensils are beautifully paced one on another. Few years back could see open grounds from here. Indira camp was a swamp, it was an open land with marshy land with tall grass and today, barely any open space in this seething, enterprise, deprivation and desperation which summarises as the crisis of all fast growing Indian cities not just Delhi. Indira camp's history and growth illustrates graphically the problems with urban planning by default. Government first ignore the existence of slums and try and get rid of them through the efforts of their 'illegal' occupants, they are 'recognized'. After this, selectively some services are offered, such as water and sanitation and even redevelopment. But slum dwellers are never granted a legal status. Thus, when the land on which slum is located becomes valuable property, people are pushed out yet again, to another uninhabitable piece of land to another slum.

### Research Questions

- What is the education level and occupation status of people in Vikaspuri slum?
- What is the current status of health and sanitation of the slum dwellers of study area?
- What are the measures to improve their socio-economic and environment conditions and provisions of clean environment?

### MATERIALS AND METHODS

The state of environment differs from one type of slum to another. This present study is based on primary and secondary sources of data and largely based on first-hand information in the form of participatory observations and interviews with local people. The inductive approach used to give the answer of research questions with respect to the emerging need to understand the social, economic and environmental aspects of the study area chosen. Tools for data gathering included questionnaire, semi-structured and open ended interviews. The questionnaire for data collection was organized in such a way so as to get information on four broad perspectives: socio-economic status, living environment, health, and environmental conditions. The primary data gathered through interviews were conducted with 90 respondents in October -

November 2014 from the Indira Camp slum in total including male and female of varied age groups based on random sampling. Information that could be self-assessed such as housing structure and their physical condition were noted down by data collectors (interviewer). The secondary data sources referred from government official reports, Census of India, UN reports, World Bank, UN-HABITAT, report by private organizations such as centre of civil society etc. The background information pertaining to extent, area, demographic characteristics, urbanization and socio-economic profile compiled from district census handbook, and economic survey of Delhi etc.

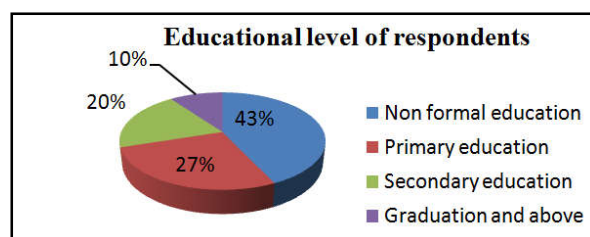
## RESULTS AND DISCUSSION

Sustainable development pertains to balance environmental, social, and economic objectives in order to maximize societal wellbeing, both present generation and for the future. Achieving slum free cities and each and everyone's access to safe and drinking water are to be covered under Millennium Development Goals. On the basis of this criterion, the analysis of slums of Indira camp show highly unsustainable environmental conditions. Adequate housing clearly defines the environmental health and socio-economic status of the people. Housing quality defines levels of exposure to indoor pollutants, food and water hygiene, levels of sanitation, exposures to physical hazards and injury and general quality of life (Briggs, 1999). Most of the environmental problems resulting from poor sanitation being considered in this research are products of man activities in the quest for development and survival. Such activities centre on how to fulfill the basic aspiration for food, clothing, shelter, transportation and comfort (Owoeye and Adedeji, 2013).

total population with heterogeneous cultural characteristics. Socio-economic status is an economical and sociological combined total measure of a person's work experience and economical and social position of a family in relation to others based on income, education and occupation (Tripathy, 2013). Through primary survey, it was found that the people of this slum are having very low socio – economic conditions because of a set of reasons (Figure 1). The effects of poor socio-economic lifestyle and environmental sanitation on the health condition of slum dwellers. The analysis of socio-economic status can be studied under the given headings:

### Education

As per as per head of locality (Pradhan), the total population of the study area, Indira camp, 5 is 3500. In the slum, the total number of people investigated was 90 in numbers that means almost 3 per cent of the total percent population under survey.



Source: Primary survey

Figure 2. Educational level of respondents

The inequality within the district has been well captured by the comparative survey of 2014. On specific congested marginal area of Indira Camp 5, the literacy percentage is 57 per cent, whereas the literacy rate of West Delhi district is 87 per cent (Census of India 2011).

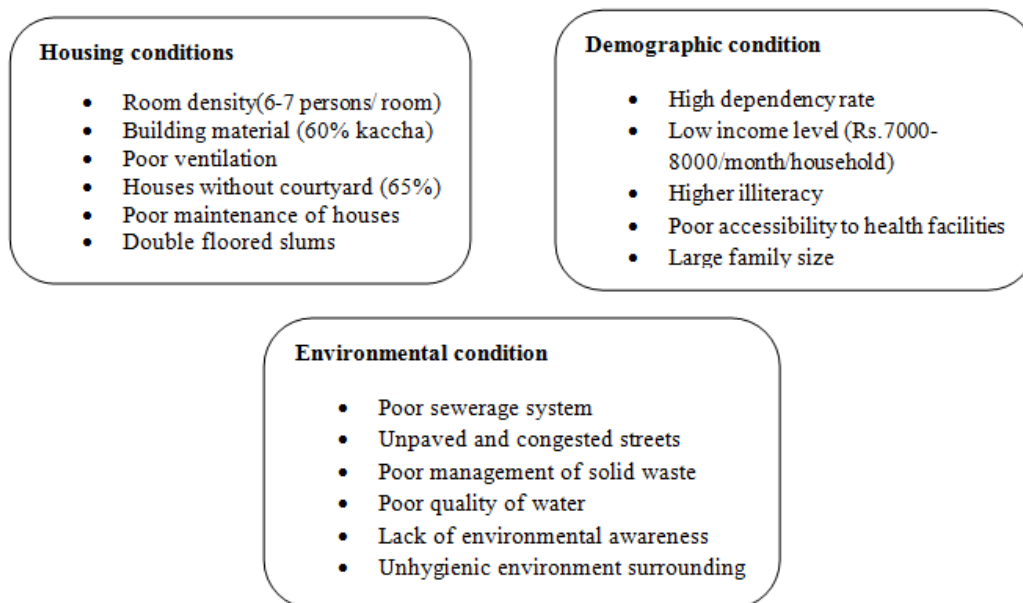


Figure 1. Socio-economic conditions of the study area

### Socio-economic characteristics of the respondents

The socio-economic status of the people living in the area is characterized by low socio-economic status and minimally low educational level. The area supports around 3500 persons as

According to primary survey conducted, out of the total of 90 people, 39 are able to read and write as per the respondents. In detailed terms, 43 per cent of respondents don't have formal education i.e. not attended any school. Also, merely 27 per cent had primary (V standard) education and 20 per cent

studied upto secondary (XII standard) level. 10 per cent of surveyed population had attended higher education above the graduation (Figure 2). In spite of availability of schools of various levels in surrounding areas, slum dwellers left their education particularly after senior secondary level. In the study area, majority of the people are below the poverty line, so their foremost requirement is to earn money for their livelihood. Thus, the educational status of this area is unsatisfactory and there lies a huge gap between the literacy rate of west district of Delhi and the area under study. The reason being, the working status of that specific area is much lower than the district specific area that in turn is in stark contrast to the state average.

### Income status

Literature obtained in household survey data on income is often understated and hence obtained information does not necessarily reflect the actual income of the household (Islam et al 1996). But there exists a direct relationship between educational status and the level of income. Higher the educational levels higher are the income. Over 40 per cent of the respondents have no formal education while only 20 per cent go beyond primary level (Table 1). This affects their level of income as majority (about 50 per cent) are either engaged in craft-works, apprentices or unemployed. Only 7 per cent of people have their own business and remaining 80 per cent are marginal workers. On the basis of survey conducted, can be concluded that 46 per cent of population don't have any fixed source of income. 8 per cent respondents have income below Rs 5000/month and only 19 per cent lies in income group of above Rs 15000/month. Income is directly related to the nature of job, majority of the respondents are engaged in daily wages jobs and earn meager amount of rupees. On the one hand, they have big size of family, and on the other, their income level is very lesser. Therefore, lower income status leads into low purchasing power makes the people vulnerable to unsustainable livelihood, which also affect environmental sustainability.

### Occupational status

The people of the Indira camp are mostly associated with marginal group of labourers. Most of the people are employed in unskilled and constructional work. The work pattern of the slum dweller is related to the types of job opportunities available in the city (Dutt, Tripathi and Mukhopadhyay, 1994).

**Table 1. Occupational status of respondents**

Occupation	Number of persons	Percentage
Construction works	33	37
Own business	6	7
Bound laborers (factory)	12	13
Daily wage laborers	9	10
Labour as domestic	18	20
Others (including Government service)	12	13
Total	90	100

Source: Primary survey

Most of the people are engaged in constructional and low wage semi skilled activities. They do not have economic security. Majority of the people go in nearby areas for their work. Women work as domestic laborers, maids, and sweepers in

nearby housing apartments and only 7 per cent of population is having their own business for economic sustenance. It is matter of the fact that this slum area provide the manual services to nearby areas. Remaining 13 per cent of the surveyed population are engaged in other activities including government services (Group A to D). Few respondents argued that they wants some loans with low rate of interest from government to start the new business.

### Housing conditions

Housing amenities are very important part of life, which varies from place and influenced by several socio-economic aspects like income level, environmental conditions, and cultural practices and so on. But it is impossible to maintain hygienic design at the time of formation of slum (Strachan, 1989).



**Figure 3. Poor housing and infrastructure**

The components of housing amenities that can affect the health and other aspects are number of rooms, number of persons living, sources of water supply, sanitary conditions and in terms of ownership of house many of them are living on rented house, only few own. The housing conditions are not in good position. Their size and shape are area is not as per good quality of life (Figure 3). The roof of the houses are made up of tin and double floor houses due to shortage of houses

### Environmental conditions

The environmental status of the slums has been determined based on the state of sanitation, solid waste disposal and drainage (Hossain, 2010). The environmental health of a community is in many ways influenced by not only the socio-economic and physical conditions but also by environmental services available in the locality.

### Sanitation

The lack in infrastructure facilities affects the various other aspects of life including poor sanitation facilities, lack of drainage facilities and others. Polluted drinking water, insanitary living conditions including lack of sewerage and, improper solid waste disposal and open defecation close to living spaces, poor personal hygiene and food cleanliness, all contribute to water-related diseases, which indirectly affects the economic status and create a burden over the earning



member of the family. One in every five does not have drainage attached to the sanitation. Result shows that only 62 per cent of people have access to toilet that too provided by the government. The public toilets provided to the people, but the people are not using it. The respondent argued that no proper care is being taken care of i.e. cleaning and maintenance. Therefore, no sense of belonging is seen among the people.

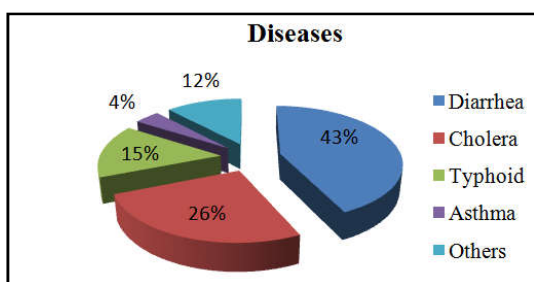


**Figure 4. Lifestyle of Indira camp no. 5**

They have been provided the bathrooms and latrines but remain unused since people believe in open defecation. Even they have bathrooms but people prefer to bathe in open area (Figure 4).

### Health issues

The most prevalent disease and the ecological problem identified in the area are diarrhea, cholera, typhoid, dysentery etc. the identified causes for it are poor sanitary facilities, poor water supply and unhygienic environment, overcrowding and poor drainage system. 57 per cent of population responded that poor sanitary conditions are responsible for diseases that people frequently suffer, followed by 23 per cent responded poor water supply as reason, only 3 per cent blamed overcrowding.



Source: Primary survey

**Figure 5. Disease incidence in slum dwellers**

Majority of the respondents were suffering from air and water borne diseases. Acute respiratory infections (ARI) primarily pneumonia and asthma—are a major cause of illness and mortality among children throughout the world, ARI assumes more significance in an urban slum setting where overcrowding and air pollution (both indoor and outdoor) are very common. As per the respondents, the highest incidence of diarrhea prevalent can be directly attributed to the absence of proper water supply and sanitation facilities in the urban slums of Delhi. As per the report of Ministry of Health and Family Welfare, Government of India - 2007, the prevalence of ARI among urban poor children of Delhi was 15.8 per cent. In the

slum area, mainly females are suffering from asthma, reason being the cooking done on 'chulha' by using fuel wood. About half of the respondents were also reported diarrhea and jaundice due to polluted water supply (Figure 5). It is found that unhygienic environment makes them highly vulnerable to diseases which further reduce their life expectancy.

### Suggestions for development

Like many other cities Delhi has also grown rapidly in the last few years due to which city failed to provide required facilities to poor people. So people are forced to live in the marginal areas leading to development of slums. Based on the major findings in this research, it has become imperative to put up some recommendations that are necessary to improve the socio-economic and environmental conditions of the people in Indira slum. The first and foremost thing needed to be done in slum area is public enlightenment, environmental and health education. Without grassroots environmental education and enlightenment, enforcement of environmental sanitation laws has very little prospect of success. The suggestions for improving socio-economic and environmental condition in the study area that needs to be considered are:

- Free education with fellowship should be given to them upto graduations level.
- Special plans should be implemented to root out their poverty in urban slum.
- Residents to be given infrastructure subsidies and loans to improve their housing.
- On social capital side, an increased awareness of health, sanitation and community participation and a reduction in diseases like diarrhea, respiratory problems.
- Health insurance scheme should be introduce with minimize premium.
- Door to door campaigning and involving the school children to convince the families about health benefits of using toilets.
- Improvements in physical environment of slums with new/upgraded footpaths, improved drainage and housing conditions.
- Moving towards slum upgrading instead of its eradication or rehabilitation, to improve the conditions in a slum rather than try to remove it.
- Proper transparency in the funds allocated for the development of slum area.
- Developing the women oriented community based poverty reduction programme. Also to start a thrift and credit society to be started as a small savings bank for the women with the encourage savings.
- Organizing of free health camps within period of six months or a year.
- Enhance the awareness among slum people about how environment affects human health and sustainable life.
- Participation of slum people in developmental plans and planning should be increased.

### Conclusion

Slums are a clear manifestation of a poorly planned and managed urban sector and, in particular, a malfunctioning housing sector. Like other slums of India, Indira camp has also

grown rapidly in the last few years. As a result of it, area failed to provide required infrastructure facilities to the people. The areas lack infrastructure and urban services along with the degraded local environment which is the product of illiteracy and unawareness, consequently the slum dwellers are facing health risk and threats. In order to achieve healthy and sustainable life, their inclusive development is need of the hour. These include the good income and educational level, sound environmental conditions, and better housing conditions. The environmental variables investigated include water quality measured by its sources, condition of sanitary services measured by toilet types, drainage conditions, methods of waste disposal, and condition of bathroom and kitchen services and the totality of environment around dwellings. This prevailing situation of degraded environment does not guarantee quality water supply in the area as the water obtained from the sources such as hand pump, tankers are not treated before used. Hence, the people stand a greater risk of contracting serious water borne diseases including cholera, typhoid, diarrhea and jaundice. Thus, a large number of the housing stock in the area has low relative habitability which has consequent effect on the state of health, socio-economic wellbeing and emotional stability of the residents and all these factors are interrelated to each other as lower educational level leads to low income level, further lack of housing facilities and poor environment.

A lot more initiatives need to be taken against the challenging life of people of Indira camp number 5. Educating people and creating more awareness is only weapon to end the challenging life of the people. Overall socio – economic and environmental conditions are poor and the area under study need immediate action on the part of government for their inclusive development in order to maintain urban sustainability. There is dire need to enhance slum dwellers participation in their development plans and policies. Further research is needed to help citizen to improve socio-economic and environmental condition of the people.

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