



A DISSERTATION ON

**PUBLIC PROVISION IN WATER AND SANITATION: AN INTER DISTRICT
STUDY OF URBAN SLUMS IN JAMMU AND KASHMIR**

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CERTIFICATION

This research work title 'Public provision in water and sanitation:inter district study of urban slums in Jammu and Kashmir' undertaken by Mir Adil Nazeer with registration number 11509513 has been fully supervised and certified. Therefore it fullfills the requirement for confirmation of Master's degree(M.Sc. Economics).

Mr. Bhavnit singh Bhatra

Date

DECLARATION

I Mir Adil Nazeer hereby declare that this work is the product of my own research effort, undertaken under the supervision of Mr. Bhavnit Singh Batra and has been presented elsewhere for the award of any certificate. All sources have been acknowledged.

Mir Adil Nazeer

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Date and sign

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ABBREVIATION LIST :

NSS:NATIONAL SAMPLE SURVEY

NSSO: NATIONAL SAMPLE SURVEY ORGANISATION

JNNURM: JAWAHARLAL NEHRU NATIONAL URBAN RENEWAL MISSION

RAY: RAJIW AWAS YOJANA

NULM: NATIONAL URBAN LIVELIHOOD MISSION

NGO: NON GOVERNMENT ORGANISATION

NSSO: NATIONAL SAMPLE SURVEY OFFICE

GOI: GOVERNMENT OF INDIA

ABSTRACT

The expanding slum population has apparently exerted a lot of pressure on the existing infrastructure, especially drinking water and sanitation. The situation is worrisome in the context of inadequate provisioning and poor implementation of schemes and programmes pertaining to water and sanitation services. With the changing face of Jammu and Kashmir, delivery of essential services like drinking water and sanitation to the people living in urban slums should be a policy priority for the government. The GOI has been incorporating certain programmes at the national as well as at the state level to allievate poverty, create emloyment oppurtunities and encourage planned urban development in its public policy,yet there has been a fast emergence of urban slums in J&K due to the number of factors. The objective of the paper is to test whether the provisioning of drinking water and sanitation is equitable or not across the districts. In this study we will use correlation coefficient and regression. The study uses data from various sources on the basis of secondary data. The study is also different in many aspects like data collection, time period and policy implications and gives some suggestions like dire necessity for good governance at all levels of the government.

Key words: urban slums, poverty, sanitation

CHAPTER 1

INTRODUCTION

Slum is simply the word which varies from one form to another form which depends upon the situation or may vary from country to country. Someone from a rich may define slum as an old run building down, whereas from a poor country will define slums as un serviced haphazard construction. The general definition of slums is defined as heavily populated urban households, whose condition is worse and filthy in every aspect. Slums are of two types; poor and strangers.

Now the slums are categorized in two types:

1 Notified slums: These are the slums which come under the local bodies, state governments, local authorities, municipalities and other organization. These were identified slums.

2. Non-notified slums: these slums are with a group of below par built rooms or houses, generally of them an impermanent nature, a largely together, commonly with insufficient sanitary and drinking water facilities in polluted conditions were measured as slum were at least 20 households live around. If such family houses comes not under any authorities, it is called as a notified slum.

In slums areas there is a lack of cleanliness, serious diseases can spread easily and quickly. There is also a lack of education because most of the people we find illiterate in the slum areas mostly women's. They are facing a lot of problems a few being they lack of public transit, constant migration, lack of water, no sewage or solid waste facilities, pollution, and shelter shortages. They also face poor unaffordable houses, due to a lack of windows and the absence of electricity. They also tend to establish homes on unused land that is usually privately owned or government owned land. Therefore a short definition for a slum would be a crowded urban area, marked by poverty, where living conditions are very bad and in a miserable condition. There are many reasons for the origination of slums in Indian cities. One reason may occur because the physical structures are allowed to be created in poor conditions or the other may be due to the immigration of persons from rural to urban areas to find some work. In India Slums have formed as early as in the 17th century, Gerald Aungier, the 2nd governor of Bombay tried to attract traders and artisans to the city, and thus causing a large inward flow in the population in urban areas. Wealthy traders built their homes inside the British forts while others were forced

to live in crowded areas around the fort resulting in slums. So, this starts the origin of slums in India. The problem of overcrowding still remained until the 18th century. It wasn't till the 19th century that India saw the growth of slums (India Habitat, 2015).

Execution of low cost sanitation with lesser aids, the involvement of households should be greater, sanitary complexes for women, rural drainage system, and accessibility of money, human resource growth and importance on school hygiene. These are the important areas which should be well-thought-out (Prasad, 2013).

The policy for the urban development should focus on to provide subsidies to slums and should provide good condition for the poor and the public and private partnerships can play an important role in the urban development. There is a need to improve the state local government capacity to meet the challenges, so that an 'inclusive cities' should be created in future and the assigned funds should grasp at the target population. There is an immediate requirement for 'noble governance' at all stages of the government (Sawney 2015).

Slums are facing a lot of problems and they are constantly dealing with a lack of clean water, pollution, lack of sanitation facilities, and shortage of basic needs, poor health and education, sanitation problems. The government of India has not given any policy yet to overcome from these problems (Bandyopadhyay 2013).

According to census 2001, 55 million households live in urban areas and it was predicted that the urban population would grow to 331 and 368 million people in 2007 and 2012 respectively.

Out of which 12.04 million families do not have latrines to access and evacuate in open area. 5.48 and 13.4 million urban families use public and shared latrines respectively. The situation of poor in the urban families is even worse. The fraction of slums without latrines is 17 and 51 percent in the notified and non-notified slums respectively. In respect of septic latrines the accessibility is 66 percent in the notified and 35 percent in the non-notified areas. Also the availability of underground sewerage in notified and non-notified areas is 30 and 15 percent respectively. This imposes costs to urban areas related to public health and environment which shares more than 60% of countries GDP. In urban areas the amount of Rs. 500 Crore at 2001 losses due to diseases caused by poor sanitation to children's under the age group of 14 years (UNICEF, 2006).

1.1 Slums and the policy schemes in India:-

To control the slums in the urban areas the government has launched the schemes from time to time. These schemes are given below:-

a) PradhanMantriAwasYojna (PMAY):-this mission has been implemented during the period 2015-2022 and was launched by Prime Minister NarendraModi in June 2015 and provides a central support to urban local bodies and state government. Previously it was known as housing for all. This scheme provides a full support to have an affordable housing to all the citizens in India.The total urban households covered under this new mission are 20 million, which will be addressed through this mission. As per the 2011 census all the statutory and subsequently notified towns would be eligible to cover under this mission. This mission provides all the possibilities to the states for choosing the best options to the states in order to meet the housing demands in the urban states. This mission has also been set up to adopt a modern, green technology and build up a quality construction for houses. The people who come from weaker sections and having low incomes, schedule castes and the schedule tribes are the main targets to cover under this scheme. All the beneficiaries under this scheme will get 100,000 RS.

b)National Urban Livelihoods Mission (NULM):-This mission was launched by Ministry of housing and poverty alleviation in September 2013 replaced the existing scheme SwarnaJayantiShahariRozgarYojana (SJSRY).the main aim of this mission is to diminish poverty of the poor urban families by allowing them to right to useof self-employment to remain dependent on their own. This scheme will help them to set up self-employment venture to have an easy access of credit. This mission aims to provide shelter equipped with essential services to the homeless based in the urban areas and would address livelihood concerns to the street vendors. As per census 2001, the NULM will be implemented in all the town and districts with population more than one lack (MOHUPA).

Strategy: - NULM will adopt a following strategy

- To expand the existing livelihoods options for urban poor people.
- To support and train to the urban people for the establishment of micro enterprises.
- To build the skills for the growing market of job opportunities due to the emerging urban economies.
- To give the special attention in the urban poor people especially the children aged, mentally ill, disabled and the recovery patients.

- To address the livelihood conditions of urban poor street vendors by providing them an institutional credit, suitable spaces, social security to get the emerging market opportunities.

c) Rajiv Awas Yojana (RAY):-the main aim of this scheme is to have a slum free India in which every citizen is to have a basic civic infrastructure and all facilities and decent shelter and enable them to basic amenities. The inexpensive housing stock for the urban poor and primary plan required for the change to lie behind the failure of creation of slums (MOHUPA).

Objectives:-

- To improve the basic civic infrastructure and social amenities to slums and provision of housing.
- To address the root cause of leading to the creation of slums.
- Expanding institutional credit linkage for the urban poor to facilitate a supportive environment.
- A comprehensive capacity building and strengthening of resource networks should be institutionalized at the municipality, city and state government.

This mission was implemented in a mission mode to provide an economic provision to states, urban territories, and urban local bodies. It will also cover financial care for the formation of reasonable housing under the scheme of Affordable housing partnership (AHP).

d) Jawaharlal Nehru National Urban Renewal Mission (JNNURM): -Giving to the census 2001, the population of India is 1027 million out of which 285 million individuals live in urban areas. It has also predicted that the share of urban population may increase to 40% by the year of 2021 due to the liberalization policy adopted by the government of India and are mostly reliant on infrastructure such as water, telecom, roads, electricity and mass transportation, tied with civic set-up such as sanitation and solid waste management. The aim of this mission is to have a strategic development of known cities and to encourage the reforms. The main attention is to be on the effectiveness in urban infrastructure, community participation and urban local bodies.

Under this mission a special fund should be allocated to come across the dearth in urban infrastructural facilities.

1.2 Urban poverty issues in India:-

The India's population in urban areas is 305 million that means 30% population live in urban areas. By 2030 it has been predicted that the urbanization will reach to 50%. The countries fast development is intimately related with the challenges of urban poverty in India. This may possess several problems to India due to such high speed and a very high growth. Urban poverty in India is over 25% some 80 million people lives in below poverty line. As the rural migrants are increasing in urban areas it creates more urban poverty. The government are not in a position to give an affordable house to every in the urban areas. But if we see now from the past decade poverty has been reducing proportionally and the things are going good. In order to reduce the poverty a small micro finance has been allowed to many Indians to start their own business and flows of credit have shown the upward. But this has not helped the overall poor people in the urban areas. Those who are far below from the poverty line no government policy or any local organization has managed to reach them and help them. The reason behind that is some organization's help only people from their community and sometimes it is difficult to locate the poor as many of them shifts to urban areas to find a temporarily job.

The higher cost of living makes more people fall above the poverty line which makes a difficulty for the poor people, but this is same for the whole country. As the poor need to survive in urban areas is more expensive because they have to spend more money as compared to rural residents very quickly to feed themselves. So the slum doesn't show any improvement in other aspects like homelessness, access of water, electricity, public transportation etc. Most of slum dwellers do not have to access of clean water, electricity, toilets, and sanitation.

1.3 Urban slums in Jammu and Kashmir

In the Jammu and Kashmir there has been a boon in the construction and diversified in the economic activities which has attracted many labors, skilled and semi-skilled from the states like UP, Bihar, MP, Rajasthan, Chhattisgarh etc. which has led to the establishment of slums. The condition of slums in Jammu and Kashmir is too worse with unavailability of basic amenities like water, electricity, sanitation etc.

Background:-

The first nationwide survey was conducted by NSSO on the economic situation of slum inhabitants in the urban cities in the 31st round period of July 1976 to June 1977. The next survey on the slum dwellers was carried out in 49th round from (Jan-June 1993) it covers both urban as well as rural slums. After the gap of 10 years, the third survey was carried out in 58th round (July-December 2002) covers only the urban slums. The fourth survey in the series was conducted in the 65th round (July 2008-June 2009). This survey covers the present condition of slums and the changes in the condition of facilities available to them. Like the 3rd survey this survey also covers the urban slums. The present survey carried out in the 69th round in the 5th nationwide survey between the periods July 2012 to December 2012. This survey was also only confined to urban sector only (NSS Report, 69).

The main aim of the survey was to check the condition of slums both in the notified and non-notified, with respect to infrastructure like the areas where slum is located, electricity, and drinking water, garbage disposal and changes in the condition and source in the improvement.

1.4 Comparisons of facilities provided to urban slums between the Jammu division and Kashmir division from the last five years

According to NSS, The number of slums estimated in J & K were reported to be 91, out of which About 2657 households lives in 10 Notified areas and 2198 households lives in Non-notified areas. In the Jammu division, an estimated 11 number of slums existed in Non-notified areas, where as in the Kashmir division out of 80 slums, 10 comes in the notified and 70 comes in the non-notified areas. In the Jammu division 100% slums were located on the private land where as in the Kashmir division 93% of slums were located on the private land only 7% lives in the public land.

- The improvement in the water supply in the Jammu division has improved 20% where as it has improved only 7.5% in the Kashmir. While as the improvement in the water supply at the All India level of slums is 43%. which shows that Jammu and Kashmir is lagging behind the improvement in water supply.
- The electricity facility of slums in the state level has improved 19.5% which is quite low as compared to the all India level which shows the improvement of 37% of electricity

facility .while as the electricity facility improvement in Jammu is 20% and in the Kashmir division it has improved only 19.5%.

- Also the improvements in the street lights is 7.2% of the slums in the J \$ K while as the improvement in the national figure of street lights in the slums is 37%.now in the Jammu division 60% of urban slums shows improvement while as there is no improvement in the street lights in the Kashmir division.
- The improvement in the latrine facility in the urban slums of J \$ K has shown the 17.1% which is quite half of the national figure; the improvement is 32% in the latrine facility. The improvement in the latrine facility in the urban slums in the Kashmir division is 19.5%, where as there is no improvement in the latrine facility in the urban slums in Jammu Division.
- Only 2.4 and 5% shows improvement in the drainage system and garbage disposal facility respectively, which is quite very low as compared to national level, the improvement in the drainage and garbage disposable facility is 33.4% and 34% respectively. Where as in the Jammu division 20 and 40% shows improvement in the drainage and garbage facility respectively. And in the Kashmir region there is no such improvement in the drainage and garbage disposable facility in the urban slums.
- The education at primary level and medical facility in the urban slums of J \$ K has improved 20% for both, while at the national level the education at primary level and medical facility has improved 30% and 20% respectively.20% of slums in Kashmir division has shown improvement in the both education and medical facility. While such there is no improvement in the urban slums of Jammu division in the medical facility and primary education at the primary level.

Table 1

Per 1000 distribution of slums facility provided during last 5 years in the Kashmir and Jammu division

Facility	Jammu Division				Kashmir Division			
	Per 1000 number of slums where				Per 1000 number of slums where			
	improved	Not improved	Deteriorated	Not Deteriorated	improved	Not improved	Deteriorated	Not Deteriorated
Water Supply	200	800	0	0	75	925	0	0
Electricity	200	800	0	0	195	805	0	0
Street light	600	400	0	0	0	1000	0	0
Latrine	0	1000	0	0	195	805	0	0
Drainage	200	800	0	0	0	925	0	0
Sewerage	0	600	400	0	0	1000	0	0
Garbage Disposal	400	600	0	0	0	1000	0	0
Approach road to the Slum	400	600	0	0	195	805	0	0
Road within the Slum	200	600	200	0	119	75	0	0
Educational facility at primary	0	1000	0	0	195	805	0	0
Medical Facility	0	1000	0	0	195	805	0	0

SOURCE: -69th Round NSS Report - Urban Slums in J&K

So from the Table 1.1 we see that the water supply, Electricity, Garbage disposable, Drainage and street light in the Jammu division has shown some improvement in the urban slums as compared to the Kashmir division there is no such improvement in the electricity, Garbage disposable, Drainage and street lights in the urban slums. While as in the urban slums of Kashmir division there is improvement in the Latrine, Educational facility at the primary level and the Medical facility as such there is zero percent improvement in these areas in the urban slums of Jammu division. But there is no such improvement in the sewerage facility in both the urban slums of Jammu and Kashmir division .Also it shows the zero percent improvement in the sewerage facility in both the areas in the urban slums.

1.5 SCOPE OF THE STUDY

The number of people living under notified and non-notified slums or slum-like habitations in India has grown rapidly according to the latest Census (2011). The expanding slum population has apparently exerted a lot of pressure on the existing infrastructure, especially drinking water and sanitation. The situation is worrisome in the context of inadequate provisioning and poor implementation of schemes and programmes pertaining to water and sanitation services. With the changing face of Jammu and Kashmir, delivery of essential services like drinking water and sanitation to the people living in urban slums should be a policy priority for the government. Using Inter district analysis of the lately released NSS Report 2016 on urban slums this study highlights important issues that impede effective water and sanitation and supply of other civic services in the urban slums of Jammu and Kashmir. Studies have questioned the sustainability of current urbanization patterns—given the growth of populous urban centers in almost all regions of the country.

1.6 OBJECTIVES OF THE STUDY

- To know the effect of key policy responses and recent initiatives of the recent decades, and assesses how far these have addressed priorities identified in the urban slums

- To highlight the multidimensional nature of the challenges faced by the urban slums in different districts of J &K.
- To do inter district analysis of the provisioning of drinking water, sanitation and other civic supplies using the latest available data by the NSS 2016 on urban slums in Jammu and Kashmir
- To test whether the provisioning of drinking water and sanitation is equitable or not across the districts.
- To set out recommendations for strengthening existing policies and their implementation.

1.7 EXPECTED OUTCOMES

- Insightful findings/inferences are expected to be drawn pertaining to policy and budgetary priorities of the government of Jammu and Kashmir in the provisioning and delivering of services in the urban slums
- An analysis of the various reasons for the dismal conditions of essential services is merely not enough; rather, solutions to improve the scenario need to be looked into. This study is expected to help in framing a comprehensive agenda for the overall and equitable development of slums through a time-bound mission while taking into account the inter-district differences.
- This study is also expected to highlight the extent to which redress of other macro issues such as land tenure rights, livelihood options, and education and other facilities in slum colonies can make water and sanitation schemes more effective rather than just ad hoc interventions.

1.8 PROPOSED WORKPLAN WITH TIMELINES

- Thorough study of the 69th Round NSS Report on Urban Slums in J&K 2016 in January, 2017
- Descriptive and Inferential Analysis in February and March, 2017
- Final preparation of the report by 15th April, 2017

1.9 Organization of the study

The study has been divided into five chapters, chapter one gives a brief introduction about the topic ,objective of the study, scope of the study and proposed work plan, chapter two presents the review of literature, chapter three presents the research methodology , chapter four presents the Data analysis part and chapter five presents the conclusion and recommendation part.

CHAPTER 2

REVIEW OF LITERATURE

Author	Objective of the study	sources	Methodology	Conclusion
Sawney(2013)	This paper evaluates that the certain programmes designed via the government to control the increase of slums and the efforts to have a complete manage on the slum dwellers.	NSSO,Ministry of home affairs,GOI	Data have been analyzed with recognize to the ratio of slum population to general population, country-wise distribution ofSlums in addition to their demographic profile.	It concludes that the policy of urban improvement must focus at the clearance of slums And restoration of the bad and public-private partnership mode is a manner out for incorporated city development.
Stopnitzky (2012)	The intention of the paper is to evaluate the effect of the whole Sanitation campaign's subsidy	WHO, Indian Census(2011), Indian weekly(2010), world Bank(2005), Department of	OLS and fixed effect regression, Linear regression with fixed effects,	It concludes very small increases in latrine ownership due to the costly subsidy Program, indicating new insights into the sanitation debate regarding the relative

	programme on family latrine adoption.	drinking water and Sanitation, Ministry of Rural Development	Propensity score	importance of social pressure versus subsidies.
Prasad(2013)	This paper focuses on the socio, economic and political conditions related to sanitation and the factors involved for poor sanitation and other health problems.	World health Organization	Primary data, Secondary data was collected from Government agencies	The findings of the paper indicates suitable styles of personal involvement and public private partnerships, coverage in Indian context and emphasis on sustainability with political pledge are requirements to bring the change.
Panda and Agarwala(2013)	This paper focuses on the issue that whether Delhi's budget is responsive to water and sanitation services (WSS) in Slums.	Government of Delhi, Delhi Jal Board, Urban Development & Public Works, Municipal corporation of Delhi	Percent of GSDP	There is need to have an improved governance structure and processes at the institutional level so that significant policy benefits reaches end beneficiaries.

Kumar(2015)	This paper focus on an increasing disparity across caste and ethnic groups and consumption expenditure classes.	NSS(1993-2008/9), Census on India(2001 and 2011), World Bank,	Deprivation measures, Modified Sopher's Disparity Index, Annual compounde d.	there may be want of immediate action closer to get right of entry to primary services, with attention closer to rural India ,to lessen the growing disparities for weaker phase of the society for raising the general of existence and properly-being of the humans
Swaminathan and Mukherji(2012)	the association between slum house and nutritional status of women's in India by means of the usage of competing classifications of slum kind.	National Family Health Survey (NFHS-3),	Body mass index data, multinomial regression	The association between slum house and dietary effects is very small and depends on how one defines a slum and also suggests that slums must appearance past the contemporary dwelling situations to correctly attain the most prone.

Subbaraman et al.(2013)	The city slums in developing international locations that are not recognized by means of the government frequently face legal get admission to municipal water supplies. These consequences inside the advent of insecure “casual” water distribution systems that can increase water-borne disorder risk.	WHO,UNICEF	Regression analysis, Primary data	This suggests that secure storage and household water remedy interventions may also enhance water nice in slums. Problems of high rate, inadequate amount, and negative supply of quality can most effective be remedied by way of providing unrecognized slums with equitable get right of use to municipal water resources.
Pullan(2014)	This paper expects to inspect the geographic imbalances in scope of drinking-water supply and sanitation commonly focusing on rural-urban will Control	UNICEF, Demographic and Health Surveys (DHS), WHO	Cluster-level data on household, regression models, small area estimation (SAE), Bayesian	This study identifies important geographic inequalities in use of WSS previously hidden within national statistics, confirming the necessity for targeted policies and metrics that reach the most marginalized populations

	a substantial number of irresistible diseases.		spatial conditional autoregressive (CAR) model	
Kranthi and Rao(2009)	The goal of this paper is to comprehend the connection between the residency security and the access to basic facilities in slums.	Government of Andhra Pradesh, Andhra Pradesh Urban Services for the Poor (APUSP), GOI	Primary Data, Random Sample of House holds	The outcome demonstrates that residency security is one of critical parameters for the arrangement of fundamental services to slums.
Bandyopadhyay, Agrawal(2013)	The objective of this paper was to study the slum areas and to examine their living condition, and to find out the most critical and problematic zone of slums.	UN-HABITAT, Census of India(2001), NSO,	1) %age of urban population. 2) % of population in notified and non-notified slums.	1) Country need to perceive that urban poor are dynamic specialists not the recipients of advancement. 2) Local specialists need to give official expert with money related and Human resourcesto convey services and infrastructure to the urban poor.

Kalia and Chander (2014)	<p>1) Reasons behind the illiteracy or low level of education among the poor women residing in the slum areas.</p> <p>2) Various schemes on women education initiated by the Government had any impact on their lives.</p>	Census of India (2011)	Primary data, Random sampling	The result shows that women in authorized slums had started realizing the importance of education as compared to un authorized slums and also they have started taking the benefits provided by the govt. for them.
MaruthiandBusenna	This paper aims to examine the status of Drinking water, Sanitation and Hygiene practices of the Dalits of Karnataka.	Karnataka census, primary data 2014	Primary survey, Random sampling technique	The result shows that nearly 82% of the Dalits don't have their own toilets; due to lack of money and space were the major reasons behind that.
Hanchett et. Al(2003)	This paper describes the water aid supported programme of water, sanitation and hygiene	Bangladesh Bureau of statistics, Census of Slum Areas and Floating Populations	Percentage of urban programme beneficiaries	The programme has improved the living condition of many poor people, but large numbers still cannot gain full access to programme facilities

	education implemented by local NGO'S of Bangladesh's two largest cities, Dhaka and Chittagong.			Because they do not have enough money to use the facilities for alltheir water and sanitation needs.
Kundu(1991)	This paper examines the nature and magnitude of disparity in the access to water supply and sanitation of people in the urban areas.	NSSO, national commission on urbanization	Percentage distribution of households	It can be argued that while efforts are being made to improve the macro environment in the large cities through investments in the access to water supply and sewerage systems, a large proportion of the poor remains outside it.
Bartlett(2003)	This paper examines the implications of inadequate provision of water and sanitation for children's health and general development, especially in urban areas.	African Population and Health Research Centre	Mortality and morbidity rates for infants	The health problems and their wider implications are related to inadequacies in the provision of water and sanitation, which may fail in critical ways to meet the needs of young children and those who care for them, even when officially deemed to be improved

Mohapotra(2012)	This paper focuses on the hyper urbanization in the developing countries which has outpaced the ability to the government to provide essential infrastructure.	Directorate of census operations Chandigarh, census of India	Random sampling of households	Due to lack of basic infrastructure and of individual quality of life which led to humanitarian crisis and in this crisis the urban poor suffer disproportionately.
Saeed et. Al(2013)	The aim of this current study was to determine the prevalence of water-borne diseases and to Assess the extent of poverty because of poor health and low income in squatter settlement.	WHO, UNESCO	Simple random sampling technique, chi square test	The recommendations for the squatter settlement include, introducing cost effective water treatment plant, schooling facilities, installation of a filtration plant, construction of a water storage tank, better sanitation facility, free dispensary, provision of an alternate place to reside.

Sarkar et al.(2013)	This paper focuses on the burden of childhood diseases and malnutrition in such populations is difficult to quantify due to unorganized urbanization.	United nations millennium development goals, Urban health care	Fisher's test, Wilcoxon rank sum tests for continuous variables	Frequent illnesses may adversely impact on children's health and development, besides additional burden on families who need to seek healthcare and findresources to manageillness.
Rode(2009)	This paper examines the Incidence of malnourishment among pre-school children in demolished and non-demolished slums.	National Center for Health Statistics (NCHS), primary survey, WHO	Z Score, slum percentage, Regression model	Due to Demolitions it has a negative impact on future economic growth and Human development in a highly urbanized socio economically and culturally well state.
Subbaraman(2015)	Adverse life impacts on the slum's residentsdue to measure deficiencies in a broader array of water service delivery indicators,	National family Health survey, UN-HABITAT	Multivariate regression analysis, Gini coefficient	To advance a broader array of health, economic, and social outcomes for the urban poor, use of multi-dimensional water metrics by the govt., slum communities and researchers can play an important role.

CHAPTER 3

RESEARCH METHODOLOGY

DATA SOURCES:-The data is of Descriptive in nature. The data has been collected from NSS of 69th round 2016 of Drinking water, Health Hygiene, Sanitation and Housing condition of urban slums Jammu and Kashmir and Ministry of Housing and Urban poverty Alleviation. The data is totally based on the secondary data. The inter district descriptive analysis has been done.

TOOLS: - For the Analysis a simple linear regression technique and correlation will be used to show the discrimination among the slums in the Jammu and Kashmir division. For the attainment of other objectives, we are using descriptive analysis including Bar Diagrams to examine it clearly.

We use correlation coefficient to analyze that is there any correlation between total funds and piped water and Drainage system and also we use regression to identify whether there is any relation between total funds (TF) and Non-piped water (NPW), Non Drainage system (NDS), urban slum population (USP), Education system in urban slums (ESIUS).we have also used Shapiro-wilk test to check whether our model is normally distributed or not.

CHAPTER 4

DATA ANALYSIS

Total funds provided by the government for improving the Drinking water and Sanitation

In this section an attempt has been made to examine the total funds provided by the Government across the different districts of urban slum areas in Jammu and Kashmir and their impact on the improvement of the piped water and Drainage system in table 2.

TABLE: 2

Total Funds provided by the Government in Different Districts to improve the Drinking Water and Sanitation

Districts	total funds in lakhs	Non piped water	Non Drainage system	urban population in slum areas	educational level in urban areas
Anantnag	19939.16	25.00	65.00	0.105	59.2
Bandipora	12658.2	46.50	76.40	0.025	54.33
Baramulla	23662.19	94.90	72.70	0.066	61.96
Budgam	18299.79	2.50	75.40	0.034	54.01
Doda	12357.14	6.90	82.00	0.012	62.75
Ganderbal	9545.95	9.40	3.20	0.018	56.47
Jammu	41421.5	15.50	18.40	0.290	78.24
Kargil	6809.59	100.00	100.00	0.005	69.64
Kathua	18038.39	46.90	26.70	0.033	70.83
Kishtwar	8101.47	42.00	35.00	0.006	53.98

Kulgam	12269.63	13.60	87.80	0.030	57.41
Kupwara	18152.2	53.00	37.80	0.038	62.92
Leh(Ladakh)	9502.64	96.10	98.30	0.024	72.1
Poonch	11321.95	51.20	43.10	0.015	64.68
Pulwama	20411.5	64.00	51.60	0.030	61.85
Rajauri	17136.9	53.90	46.30	0.017	66
Reasi	12804.83	13.60	46.70	0.010	55.85
Samba	13366.44	72.80	10.70	0.020	79.93
Shopian	12538.33	7.80	31.50	0.006	59.54
Srinagar	7978.43	23.00	20.20	0.467	53.51
Udhampur	13214	37.40	48.50	0.041	51.8

Source: NSS, Jammu and Kashmir 2016

So the above table reveals about the total funds in lakhs provided by the government in the urban areas across the different districts of Jammu and Kashmir from 2000-2017. Among these Districts Jammu comes the first District where the government is spending more money as 41421.25 lakh rupees compared to other districts, but still there is some lack in the improvement of Drinking water and the Drainage system. the non-piped water in Urban slum areas is 15.50 and the non-drainage system in urban slums is 18.40%. Also the Education system in Jammu is 78.84%, which is nearly 1% less than Samba district. As Samba comes the 1st where the educational level is high and after that Jammu comes the 2nd where the educational level in the urban slums is high. Baramulla is the 2nd District where the government is spending 23662.19 lakh rupees total funds for the safe drinking water and sanitation purposes. Where the Non-piped water is 94.90% and the Non Drainage system is 72.70% which is still lagging behind if we compare it with the Jammu District. The funds provided by the Government in Jammu District is nearly double as compared to Baramulla District. The education system in Baramulla also is 61.96%. the proportion of urban slum population in Baramulla is 0.066 and in the Jammu District

the urban slum population is 0.290 according to National sample survey, J&K. which is higher in slum population after the Srinagar District. But still there is some improvement in the Non-piped water and the Non Drainage system as compare to Baramulla district. Kargil comes in the Last District where the Government is spending very less funds, due to which there is zero improvement at all in the piped water and Drainage system.

Table 3: Represents the Beta Coefficients of regression growth model, Standard error and significant effect on state Total funds. The result of Regression Model shows that urban slum Population and educational system has positive effect and Non-piped water and Non- Drainage system has a Negative effect. Number of Observations is 21. R^2 of Total funds is .8705. R^2 is a statistical measure of how close the Data are fitted to the regression line. Variance Inflation Factor is also calculated in the below Table to check the Multicollinearity Problem.

Table 3: Regression Model for table 2

Source	SS	df	MS		Number of obs	21
Model	3.048865	4	.762216311		F(4, 16)	26.88
Residual	0.453717	16	.028357313		Prob.> F	0
Total	3.502582	20	.175129113		R-squared	0.8705
					Adj R-squared	0.8381
					Root MSE	0.1684
Total funds	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Non piped water	-0.00302	.0014401	-2.10	0.052	-0.00608	2.95E-05
Non drainage system	-0.00407	.0023287	-1.75	0.099	-0.00901	0.000863
Urban slum population	0.001571	.000161	9.76	0.00	0.00123	0.001912
educational system	0.012489	.005501	2.27	0.037	0.000828	0.024151
constant	8.667164	.4305791	20.13	0.00	7.754377	9.579951
Variance inflation factor						
Variable			VIF		1/VIF	
Educational system			1.4		0.713445	
Non piped water			1.26		0.792254	
Non drainage system			1.17		0.854732	
Urban population			1.06		0.941766	
Mean VIF			1.22			

Source: Author's calculation (Level of Significance 1%, 5%, 10%)

Table 3 presents the R^2 of total funds is 0.87 it specifies that these data follow a nice fitted function and R^2 is 87.05% which sounds good. Adjusted R^2 of Total Funds is 0.838 which indicates that 83.8% variation in total funds variable is explained by independent variables (Non-piped water, Non-Drainage system, Educational system and urban slum population). According to this table urban slum population is significant at 1%, Education system is significant at 5% level and the non-pied water and non-Drainage system is significant at 10% level. Therefore H_0 is rejected and alternative Hypothesis is accepted that is there is a positive impact on total funds.

Regression equation

$$Y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \mu$$

$$Y = 8.667164 + 0.012489(\text{Educational system}) + 0.001571(\text{urban slum population}) - 0.00407(\text{Non drainage system}) - 0.00302(\text{Non piped water})$$

The regression model shows that for 1% change in education system the value of total funds increases to (0.012) units keeping other variables constant and the when the other variables are constant and 1% increase in urban slum population total funds increases to (0.001) units. Also for 1% increase in non-piped water and Non-Drainage system total funds goes down to (0.003) and (0.004) units respectively. It shows the negative relationship surprisingly which I was not expecting between these two variables.

Also Variance Inflationary factor is calculated to check the multicollinearity problem in the data. If the values of VIF lies within the range of 1 to 10 then data does not have multicollinearity problem. So values of all the variables listed in table 3 lies in 1 to 10. So, data is free from multicollinearity problem.

Table 4: Cameron & Trivedi's decomposition of IM-test for table 2

White's test for H_0 : homoskedasticity			
against H_a : unrestricted heteroskedasticity			
chi2(14)			= 13.21
Prob> chi2 = 0.5101			
Source	chi2	df	p
Heteroskedasticity	13.21	14	0.5101
Skewness	7.39	4	0.1166
Kurtosis	0.63	1	0.4268
Total	21.23	19	0.3241

Source: Author's calculation (Level of significance 5%)

Cameron and Trivedi's Decomposition of IM-TEST is used to test the heteroscedasticity problem in the data. If the p value of χ^2 is greater than 5% level of significance then there is no

problem of Heteroscedasticity. In Table 4, it can be seen that p value is 0.51 which is greater than 5% significance level. So, the data is free from the problem of heteroscedasticity. That means the relationship between the dependent and independent is the same across all the values of the independent variables.

Table 5: Shapiro-Wilk W test for normal data

Variable	Obs	W	V	Z	Prob>Z
uhat	21	0.95260	1.162	0.303	0.38101

Source: Authors calculation

H0: Data are Normally Distributed

H1: Data are not Normally Distributed

Shapiro-wilk test is used to check whether the data is normally distributed or not. The chosen alpha level is 0.05 and if the p-value is less than 0.05, then the null hypothesis that the data are normally distributed is rejected. If the p-value is greater than 0.05, then the null hypothesis is not rejected. Here the p value is greater than 0.05 that is Null Hypothesis is accepted, so here the Data are Normally Distributed.

Table 6 represents the total observations, Mean, Standard Deviation, minimum and maximum values for the variables used to estimate the Regression.

Table 6: Description of data through Mean, Standard Deviation, Min and Max

Variables	Obs.	Mean	Std. Dev.	Min	Max
Totalfunds	21.00	9.54	0.42	8.83	10.63
Nonpipd water	21.00	68.69	29.38	2.30	100.00
Nondrainage system	21.00	88.07	17.49	35.80	100.00
Katcha Houses	21.00	27.53	22.89	0.00	79.70
Urban slum population	21.00	420.77	241.01	17.31	825.54
Educational system	21.00	62.24	8.10	51.80	79.93

Source: Author's Calculation

Urban slum population comprise the Highest Mean and Standard Deviation (420.77, 241.01),

Total funds contain least mean (9.54) and standard Deviation (0.42).

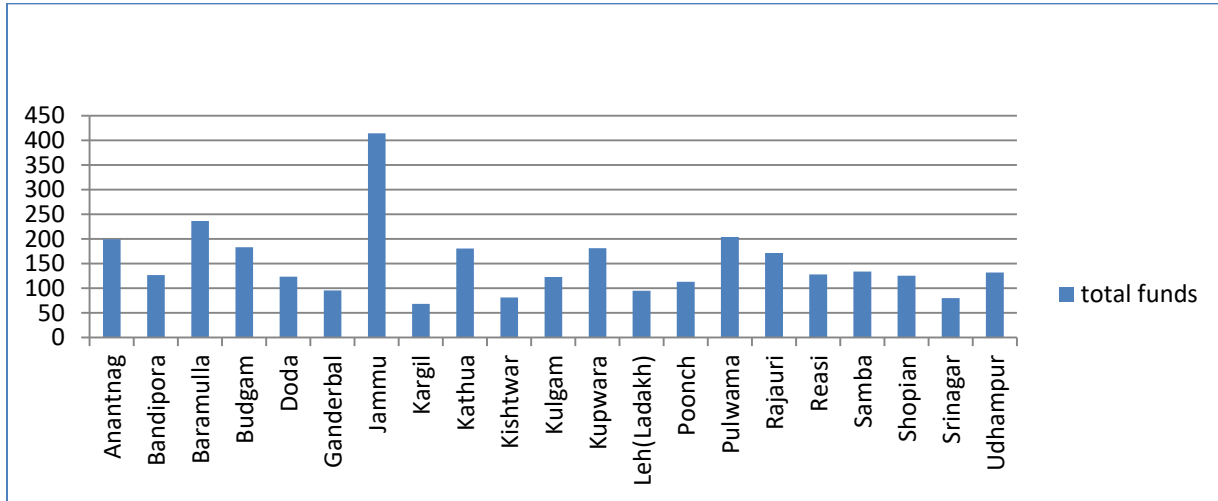
Table 7: Correlation coefficient Determinants of different variable

	TF	NPW	ESIUP	NDS	USP	BF	ISDW	KH	EF
TF	1								
NPW	0.101	1							
ESIUP	0.392	0.425	1						
NDS	-0.175	-0.073	-0.348	1					
USP	0.778	0.197	0.108	0.103	1				
BF	0.3866	0.213	0.409	-0.607	0.162	1			
ISDW	0.03	-0.369	0.012	-0.277	-0.123	0.324	1		
KH	-0.1471	0.264	0.012	0.409	0.025	-0.159	-0.390	1	
EF	-0.1154	-0.306	-0.182	0.043	-0.111	0.249	0.692	-0.441	1

Source: Author's Calculation (Level of significance 1%, 5%, 10%)

Here the Table 6 represents that urban slum population is positively correlated with the total funds (i.e. r^2 is .778), Electricity facility is strong positive correlated with Improved source of Drinking water (i.e. r^2 is 0.692), Education system in Urban slum population is weak positive correlated with Total funds (i.e. r^2 is .392), Education system in Urban Population is moderate correlated with Non piped water (i.e. r^2 is .425), Urban slum population is week positive correlated non piped-water (i.e. r^2 is .197), Bath room facility is weak correlated with total funds and Non piped water (i.e. r^2 is 0.386 and 0.213) respectively. But is moderately positive correlated with Education system in urban population (i.e. r^2 is 0.409), Improved source of Drinking is moderate positive correlated with Bath room facility (i.e. r^2 is 0.324), Katcha House is weak positive correlated with Non piped water and moderate positive correlated with Non Drainage System (i.e. r^2 is 0.264 and 0.409) respectively, Electricity facility is weak positive correlated with Bathroom facility (i.e. r^2 is 0.249).

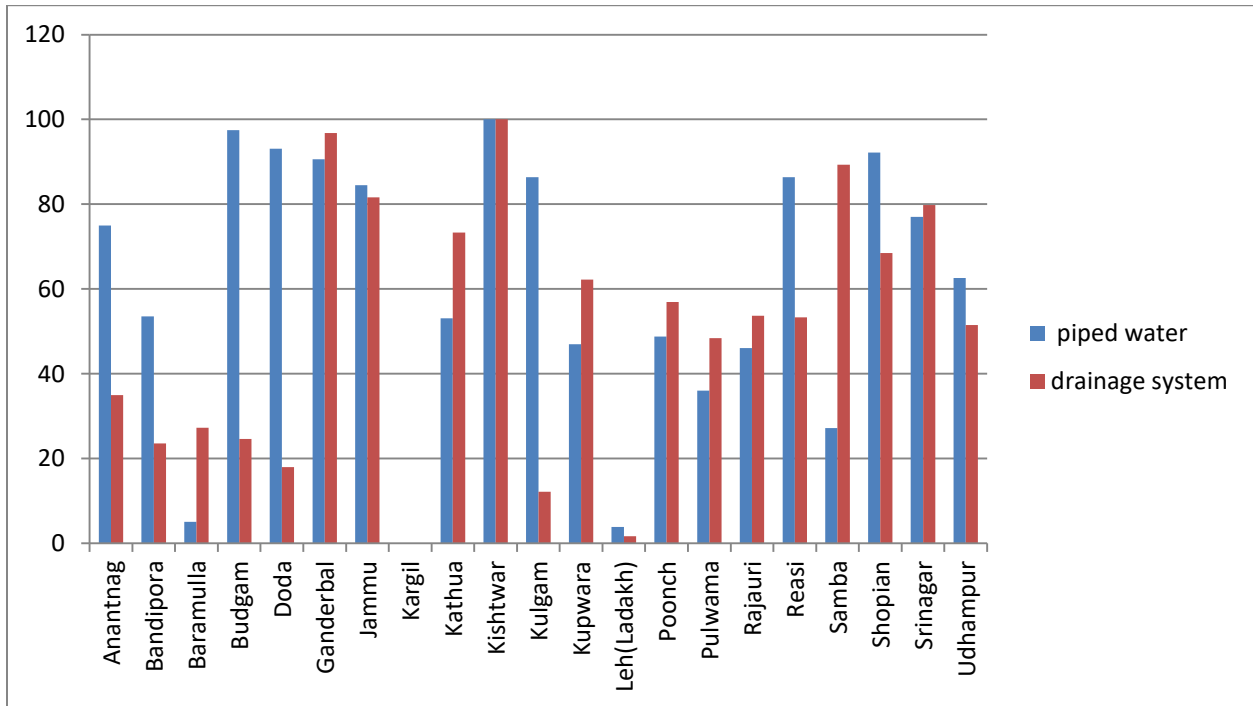
Figure 1: Total funds provided by the Government in hundred Lakh rupees in J & k



Source: NSS, J& k 2016

Figure 1 represents the total funds provided by the Government in different Districts of Jammu and Kashmir, where the Districts are shown on Y-axis and the total funds are shown on X-axis. So from the above diagram it clearly depicts that Jammu comes the first District where the government is providing a total funds of RS 4121.5 lakhs for the improvement of Drinking water and sanitation, followed by Baramulla where the Government is spending a total fund of RS. 23662.19 Lakhs, which is nearly half to the Funds provided to the Jammu District. pulwama and Anantnag are the two districts where government is spending nearly equally total funds for public provision as if we look in the above in the above Diagram. kargil comes the Last District where the government is spending the minor funds followed by the Srinagar the capital city of Kashmir arises the 2nd last district where government is spending total funds for the improvement of Drinking water and sanitation.

Figure 2: Piped water and Drainage system in different Districts of Jammu and Kashmir



Source: NSS, J&K 2016

Figure 2 represents the piped water and Drainage system in Different Districts of Jammu and Kashmir. In the Above Diagram it is clear that both the Piped water and Drainage system is high in the Kishtwar District Followed by Budgam and Ganderbal District where piped water is high in Budgam District and in the Ganderbal District Drainage system is high after the Kishtwar District, But in the Budgam District Drainage system is still very less that means it has not improved and in the Ganderbal District piped water is very less. In the Anantnag District piped water has improved but Drainage system is still very less and same in the Bandipora District where the Piped water has improved and Drainage system has not improved as the half of that in the particular District. Now if we look in the Kargil District Where the total funds provided by the Government is precise less as compared to the other District, there is zero improvement in the Piped water and the Drainage System followed by the Ladakh District which is the 2nd last District where the improvement of Drinking water and Sanitation is Very less as shown in the in the above Diagram.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The Urban population of Jammu and Kashmir grew from 25.50 lakh in 2001 to 34.34 lakh in 2011. The great majority of people headed for urban areas due to economic reasons and the urban areas have attracted the people from the rural corresponding persons and from the past Decade migration from rural to urban area is increasing at a faster rate. Especially, now that Agriculture in Jammu and Kashmir has no longer a worthwhile proposition. In the Jammu and Kashmir there has been a boon in the construction and diversified in the economic activities which has attracted many labors, skilled and semi-skilled from the states like UP, Bihar, MP, Rajasthan, Chhattisgarh etc. which has led to the establishment of slums. The condition of slums in Jammu and Kashmir is too worse with no access to civic amenities like water, electricity, sanitation etc. Government is though implementing schemes like PradhanMantriAwasYojna (PMAY), National urban livelihood mission (NULM), RajiwAwasYojana (RAY), Jawaharlal Nehru National Urban Renewal Mission (JNNURM) but they have not reached out to the people from time to time properly. The total funds provide by the Government for the Improvement of Drinking water and sanitation are not utilizing equally in every Districts. From the Above Study we find that in Jammu District the funds provided by the Government are nearly as much as Double as compared to other districts and also we find that in the Kargil District The government is spending not even the one-fourth of total funds compare to Jammu District. Due to which there is zero improvement in the Piped water and Drainage system in the Kargil District.

Regression equation represent that there is a significant impact of urban slum population, Educational system in urban slums, non-piped water and non-Drainage system on Total Funds. Also in the above correlation table, the correlation coefficient of Urban slum population and Total funds r is .778, that means there is a strong correlation between urban slum population and the Total funds. so the government should increase their funds as the population in slums increase. so, the study is beneficial in formation for state in future provides for planners and policy makers to over the problem from increasing Urban slums in Jammu and Kashmir.

5.2 Recommendations

- Government must ensure the access of schemes in urban areas to every district equally.
- NGO's can play an important role in Jammu and Kashmir to provide a better Facility to Urban slums.
- The Programmes targeted to the urban slums in J & k needs to be more practical.
- Government should provide employment opportunities to the urban poor in J&K.
- Affordable Houses should be provided to the most helpless groups in urban areas.
- Basic amenities should be delivered in every Districts of J&K which are essential for dignified human living.
- Implementation is historical problem of India due to less Tran's piracy in the system so if policy made by government is practically implemented on time then society could earn positive results.
- Corruption is one of the bigger challenges in J & K; the Government should take further steps to control it, so that the basic facilities should be fulfilled to weaker section in every district.
- IN J&K there is an urgent necessity to progress the local government capability to meet the challenges and make sure that the allotted funds reach the target population.
- There is a dire necessity for good governance at all levels of the government.

LIST OF REFERENCES/BIBLIOGRAPGHY

- Abir B. and Vandana A. (2013) “Slums in India: From Past to Present” International Refereed Journal of Engineering and Science, Vol.2, 55-59.
- Amitabh K. (1991) “Micro Environment in Urban Planning Access of Poor to Water Supply and Sanitation” Economic and Political weekly, Vol.26, No.37, 2167-2171
- Arjun K. (2015) “Disparities in Access to Basic Amenities across Caste, Ethnicity and Classes in Rural and Urban India” Journal of Governance & Public Policy, Volume 5, No 1.
- Bandela A.P.(2013) “Urban Sanitation: Health Challenges of the Urban Poor” Research Journal of Family, Community and Consumer Sciences, Vol. 1(3),1-6, ISSN 2320 – 902X.
- Gyana R.P. and Trisha A. (2013) “Public Provisioning in Water and Sanitation: Study of Urban Slums in Delhi” Economic and Political Weekly, Vol. XLVIII, 5.
- I.Maruthi and Pesala B. (2015) “Drinking Water, Sanitation and Hygiene Practices Dalits in Karnataka” Journal of Governance & Public Policy, Volume 5, No 2.
- NSS 69TH Round “Drinking water, Sanitation, Hygiene and Housing condition (July 2012- Dec.2012). Ministry of Housing and Urban Poverty Alleviation.
- Natraj K. and Kavita D.R.(2009) “Security of Tenure and Its Link to the Urban Basic Services in Slums: A Case of Hyderabad” The IUP Journal of Infrastructure, Vol. VII, 3 \$ 4.
- Rajiv S.et al.(2013) “Burden of childhood diseases and malnutrition in a semi-urban slum in southern India” BMC Public Health,13:87,1471-2458.
- Ramnath S. et al. (2013) “The social ecology of water in a Mumbai slum: Failures in water quality, quantity, and reliability” BMC Public Health, 13, 1471-2458

Ravindra T. and Sweta A.(2013) “The role of social entrepreneurs in the development of cooperatives for catalyzing empowerment in the slum areas of India” African journal of Business Management,7(34),3259-3265

Saeed R., Ibrahim M., Khan E.A., Riaz A.(2013) “Exacerbation Of Poverty Among Urban Slum Dwellers Of Islamabad Because Of Poor Drinking Water Quality and Sanitation” Sci. Int.(Lahore),25(3),673-679

Sanjay S.(2009) “Does Demolition of slums effects on pre-school children’s health in Mumbai” Theoretical and empirical researches in Management, N0.1(10).

Sheridan B. (2003) “Water, sanitation and urban children: the need to go beyond “improved” provision” Environment and Urbanization, Vol, 15,No.2.

Subhakanta M.(2012) “Assessing Differential Health Vulnerability of the Slums in Chandigarh” International Quarterly for Asian Studies, 43,pg 81.

Suzanne H.,Shireen A. and MohidulH.k. “Water, sanitation and hygiene in Bangladeshi slums: an evaluation of the Water Aid– Bangladesh urban programme” Environment and urbanization Vol.15,2.

Upinder S. (2014) “Slum population in India: Extent and policy response” International Journal of Research in Business and Social Science, Vol.2 No.1, ISSN: 2147-4478.