

## KOLKATA CITY AND ITS DETERIORATING SLUM ENVIRONMENT IN TERMS OF HEALTH AND NUTRITION STATUS - ISSUES IN PERSPECTIVE

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### **Abstract**

*Kolkata city is one of the largest urban agglomerations in India having 144 Wards . It is experiencing the emergence of slums in large numbers to accommodate the huge number of people migrating from surrounding regions. The emergence of slums has started since the colonial period when the city was considered as the financial hub of the East India Company. Similar to other third world cities, urban inequality in terms of the access of resources is the prime reason behind the origin of slums in Kolkata. Kundu (2003) also opined that the inequality of resource distribution is the major factor behind the deterioration of a section of urban dwellers. The total slum population in Kolkata as per 2011 Census was 1,409,721 where a considerable volume of urban poor face a diverse deprivation and insecurity of housing and livelihood. As estimated by Kundu (2003), the entire slum population of Kolkata live in about 2011 registered and 3500 unregistered slums in the KMC, containing about 13 million hutments or 338,000 rooms. The easy availability of jobs in the city has attracted huge numbers of migrant population in addition to social and political history of the city. This in turn has led to a number of authorised and unauthorised slums in Kolkata which are identified as Hot spots of poverty having substandard living.*

*At this backdrop, the present paper has tried to make an overview of the status of slums in terms of health and nutrition profile of slum dwellers in Narkeldanga slum locale of Kolkata city falling under ward number 29 of Kolkata Municipal Corporation. As observed during the study, the continuous deterioration of health and nutrition status of the dwellers in the shanty and unhygienic environment of the slums has resulted to increased number of morbidity cases in the recent years. The paper has relied primarily on a variety of literatures, Government and Non-Government reports related to the origin of slums and its growth since Independence in the city. Data on slum population of Kolkata city has been collected from Census of India report of Government of India, 2001. Primary household surveys on Health and nutrition status have also been conducted in few slums along Narkeldanga Main Road in Ward No. 29 in Kolkata to conduct a preliminary assessment of the livelihood conditions of slum dwellers.*

**Key words :** Migration , Growth of Slums, Deprivation, Poverty, Health, Nutrition, Diseases.

### **INTRODUCTION :**

There has been an extraordinary rise in the process of urbanization throughout the world in the last fifty years. The fastest urban growth is observed in the fringes of cities, resulting to mega-agglomerations of mostly illegal squatter settlements. Growth of cities has led to major rise of urban poverty. However, the process of urbanization has invited a number of problems that include acute shortage of dwelling units, infringement of public land and extension of unauthorized residential colonies. People from rural areas mostly migrate to towns and cities in search of suitable jobs. But in absence of proper place to reside, the migrants usually encroach public land and the sites earmarked for various developmental projects. This results in the rise of unauthorized colonies building tremendous pressure on civic services and may create hindrances in the proper development of cities.

According to Fry, Cousins, and Olivola, (2002) India's urban population has increased by 31.2% between 1991 and 2001—nearly doubling the increase of 17.9% in rural population within the same period. India has experienced 2.32 % rise in urban population from 2021 to 2022. Thirty-five million plus cities are there in India and the three UAs i.e. Urban agglomerations with more than 10 million people known as mega cities include Greater Mumbai, Delhi and Kolkata, where around 30% to 40% of

urban dwellers live in utter poverty. Majority of the urban poor reside in shanty squatter colonies (slums) or on the pavement. Slums have emerged as the end products of failed policies, bad governance, corruption and inappropriate regulations. Each of the failed policies has further contributed to the deterioration of the condition of people and lowering the immense potential of human development that an urban locale may offer. Comprehensive information on the slums is therefore needed for the formulation of effective and coordinated policy for their improvement. The Census of India, a Central Government Organization took initiatives to prepare a systematic data on demography of slum dwellers residing in urban and rural areas from 2001 based on actual count. This has enabled to compile and prepare special tables for slums.

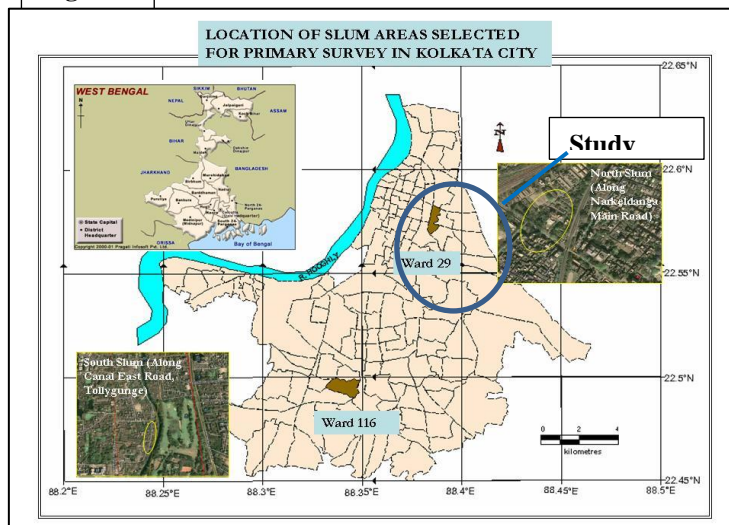
Health is an asset to a person in all the stages of life. However for urban dwellers living in slums, the health problems multiply due to their living conditions, lack of proper sanitation and sewerage, use of contaminated water, improper ventilation, acute shortage of space, crowding and dampness in the homes (Basu, 2006). Besides the environmental hazards, poor nutrition also contributes to the lowering of the resistance of the aged slum dwellers, making them susceptible to infection and chronic diseases finally accounting for the high mortality rate.

Under this backdrop, the present paper intends to perform a baseline assessment of the health and nutrition status of different age group people (infants, children, adults and old) residing in slum areas of an urban area in West Bengal, India. The urban area selected for the assessment is Kolkata, the state capital of West Bengal and a megacity in India hosting a total population of 4,580,544 (as per 2001 Census) with a slum population of 1490811 comprising of 32.54 % of the total population). As per 2011 Census, 31.35% of the total population (4.5 millions) live in slums majority of whom belong to poverty line group. These people serve as domestic workers, daily wage labourers, factory workers, rickshaw pullers, hawkers and security guards. According to Institute of Local Government and Urban Studies (2001), there are 2,011 registered (authorized slums called bustees), and 3,500 unregistered slums (squatter slums) in Kolkata (Kundu, 2003). These slums provide housing to more than 1.5 million people. The living conditions of the people living in these slums along the side of canals, large drains garbage dumps, railway tracks and roads are the worst. The slums do not have proper access to any basic amenities like sanitation and basic drinking water facilities. Majority of the slum dwellers are rag pickers with garbage dumped outside their houses adds to environmental pollution factor. Furthermore the awful living conditions of bustees and squatter settlements make them unfit for human habitation which results in large number of water borne and vector borne diseases like diarrhea, cholera, malaria, typhoid, dengue and tuberculosis among the slum dwellers.

#### **Study Area Selected:**

The study area of the present paper is Kolkata City - the State capital of West Bengal consisting of 144 Municipal wards at present. Latitudinally, the region extends from 22°45'N to 22°65'N and longitudinally from 88°25'E to 88°45'E (Fig. 1). The total area covered by Kolkata Municipal Corporation is 187.33 sq. kms. Apart from Kolkata, there is no major urban unit within hundred kilometers of distance. The other cities in the Eastern Region of India serve as provincial centres with small populations having limited economic and employment prospects. This has caused an overwhelming attraction of Kolkata in the eastern part of the country. Though the study area includes the whole of Kolkata Municipal Corporation area and secondary information have been collected for the entire region, but for a detailed household survey, a specific ward (Ward no. 29 in North Kolkata) has been selected out of 141 wards. Presently the city has 144 wards. However when the study was carried out Kolkata was having 141 wards. So all the maps have been prepared showing 141 wards.

**Fig.1**



Source : District Planning Map of Kolkata published by National Atlas and Thematic Mapping Organization, Govt. India) .

**Central Queries:**

The major queries of the present paper include the following

1. What are the general health hazards the Kolkata people are exposed to in different locales? What are the infrastructural facilities (especially govt. and Non-Government Hospitals) at recent times available to Kolkata dwellers?
2. What is the concentration of slum population in different localities of Kolkata city? What infrastructural facilities are available to slum dwellers in different localities within the City?
3. What are the common ailments that strike the different age group people (infants, children, adults and old persons) in the slums of Kolkata? What is the disease profile of slum dwellers in the engaged in different types of activities?
4. What is the nutrition status of different category workers in the slums? Is there any recognizable difference in the disease profile and nutrition status among different category workers in the slums?

**METHODOLOGY**

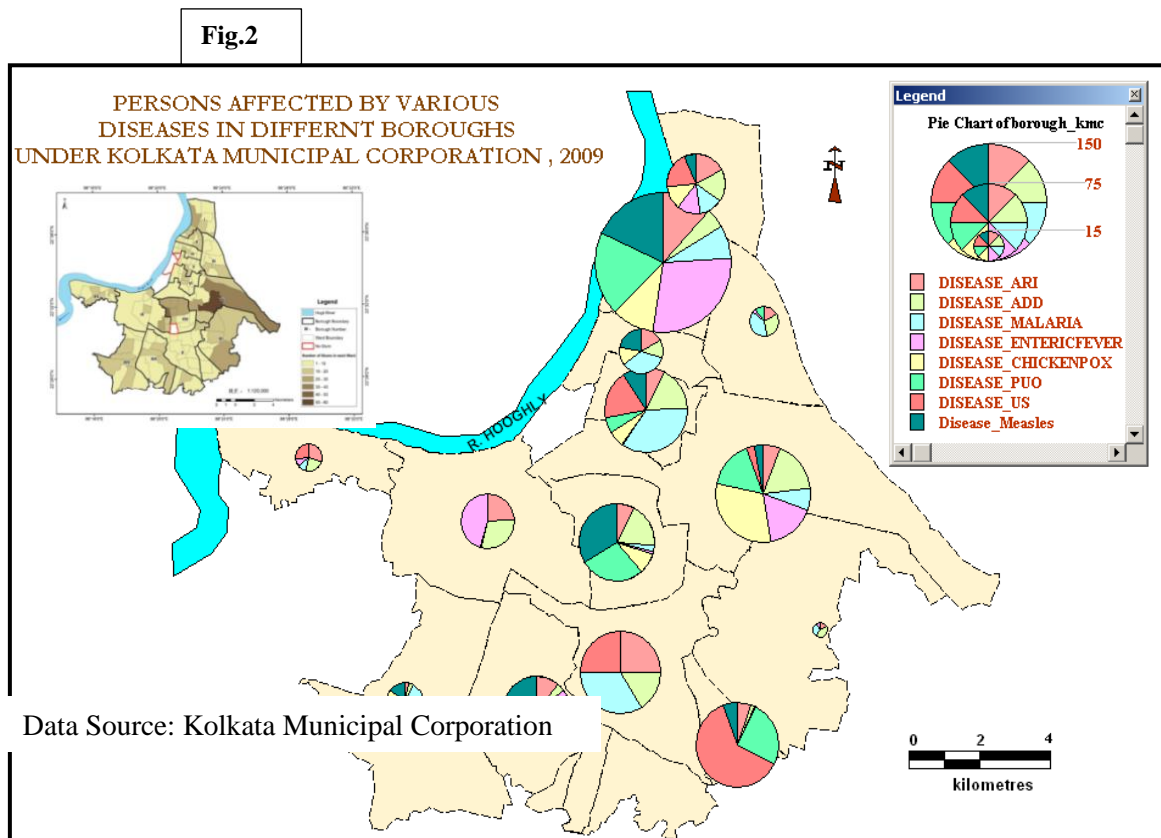
For the present study both primary and secondary information have been used. Primary data have been obtained by field visit and stakeholder analysis. The Government organizations from where the secondary information have been collected for the study include Census of India ,Kolkata Municipal Corporation ,Swastha Bhavan , Govt. of West Bengal , Bureau of Applied Economics and Statistics, Govt. of West Bengal

To strengthen, and support the secondary database, primary data have been collected from the slum (under Ward 29 in North Kolkata along Narkeldanga) running a structured questionnaire at the household level. For the household survey in the slum, sample houses were selected following Random Sampling without Replacement method (Source: Mahmood A, 1997) .Here sample size was selected as 5% of the total slum households (2000 households) along the main road of Narkeldanga locality which amounts to a total of 100 households . To carry out the household survey in the slum, the sample houses were selected following Random Sampling Procedure (without Replacement). GIS tools have been used to prepare different thematic maps. Here the maps have been prepared using Arc View GIS Software 3.1 V.

RESULTS AND DISCUSSION :

❖ **Disease Profile of Kolkata People (In general)**

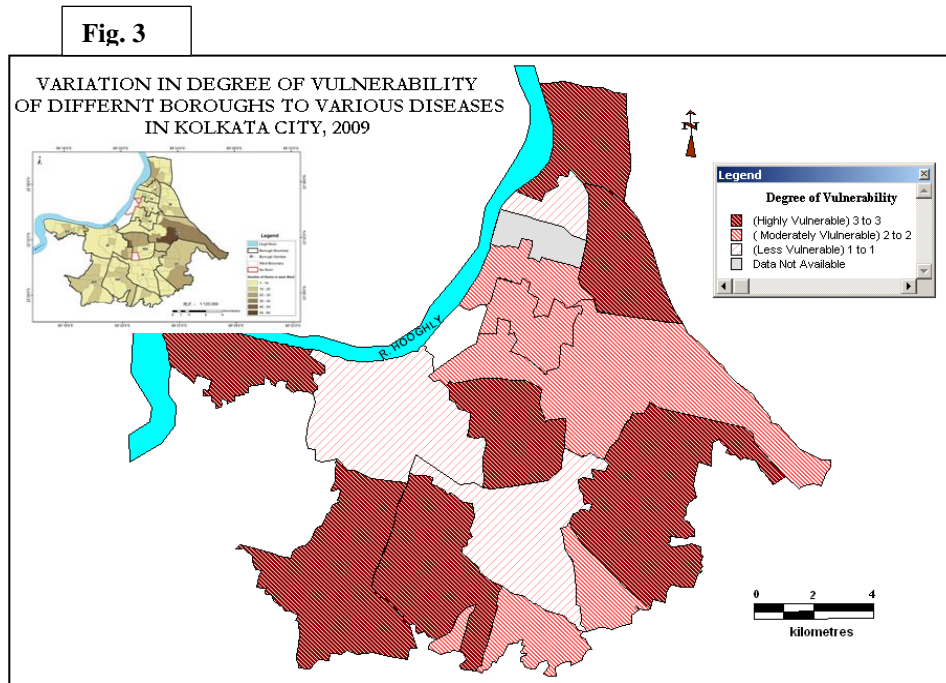
Kolkata residents mostly suffer from Acute respiratory infection, Acute Diarrheal Diseases, Malaria, Enteric Fever, Chicken pox, PUO( Fever of Unknown Origin), Unusual syndrome and Measles. Variation in the percentage of people affected by different diseases in different boroughs for the year 2009 has been shown in Fig. 2. ( Based on the information available from Kolkata Municipal Corporation, the boroughs have been arranged in decreasing order under each of the diseases in table1 (below).



The above fig. 2 shows that Borough VII located in eastern part of Kolkata Municipal Corporation area is exposed to maximum risks of Acute Diarrheal Diseases and Chicken Pox. The maximum number of people affected by Acute Respiratory Infection (ARI) , Enteric Fever, PUO & Measles is under Borough III ( located in northern portion of KMC area). While unusual syndrome is mostly found among the residents of Borough XV located in the southern part of Kolkata city. It has been observed in general that Kolkata residents are affected mostly by Acute Diarrheal diseases (water- borne) , Acute Respiratory Infection (air-borne) and by the viral disease Malaria. Borough III being located near to Baranagar Area ( in the extreme northern portion of KMC) where a number of factories are located, there the number of people suffering from Acute Respiratory Infection is relatively high. Moreover, a substantial portion of Borough VII ( in the Topsia, Tangra locality in the Eastern Suburban portion) a number of tanneries are located. The wastes from these tanneries gets discharged in the local water bodies thus contaminating the water quality and hence results increased number of acute diarrheal cases in the particular locale.

A vulnerability map (Fig 3) was prepared based on intensity of diseases affecting the Kolkata residents borough wise considering eight diseases frequent in the city limits viz. acute diarrhoeal diseases (ADD), acute respiratory diseases (ARI), malaria, enteric fever, chicken pox, P.U.O , unusual syndromes and measles. Categorization of boroughs has been done on the basis of three vulnerable classes - High medium and low on the basis of total composite scores so obtained by assigning

individual ranks to each boroughs under eight different diseases. Under a particular disease, Rank 1 was assigned to that borough where maximum number of people were affected by that disease. After assigning ranks under individual diseases to each borough the ranks were summed up to get a composite value for each of the boroughs ( Note: no data was available from KMC for Borough IV). Finally on the basis of composite scores so obtained three classes were categorized viz. Highly Vulnerable (with values ranging from 42 to 57) , Moderately Vulnerable (with values ranging from 26 - 41) and Less Vulnerable (with values ranging from 10-25).



Note : Borough map of Kolkata in the inset provided from the source Mukherjee et. al. 2021

It was observed that highly vulnerable boroughs were distributed randomly in different portions of Kolkata (found in extreme northern parts, south eastern parts, south western part and extreme western parts /port area). Moderately vulnerable boroughs were found in central and southern portions while less vulnerable boroughs occupy south central part of the city.

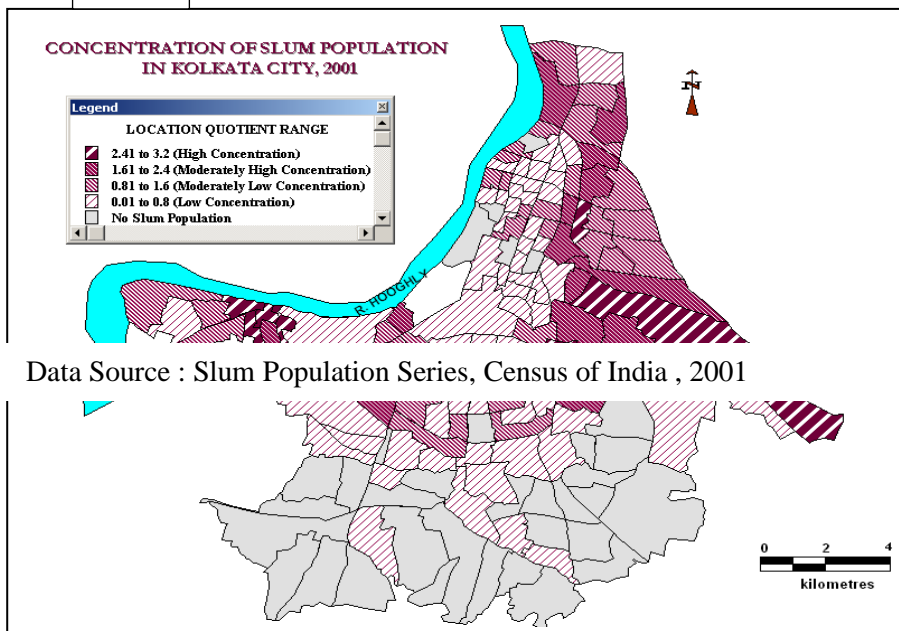
**Concentration of Slum Population & Health Infrastructural Facilities Available to Slum Population**

The prime goal of the present study was a preliminary assessment of health and nutrition status of slum dwellers in Kolkata city. For the purpose efforts were taken to prepare a map showing the slum distribution of population in different wards of the city (Fig. 4). To prepare the map LQ figs. have been calculated taking into consideration the total population and the slum population figs. of each of the 141 wards. The distribution of the Kolkata wards under each of the LQ categories is shown in Table 1, wherefrom it is found that excepting few wards (34 in number) all other wards are having slum population. The high concentration of slum dwellers was found mainly in the extreme western part (port area). In North Kolkata, Ward 29 (Narkeldanga area) was having high concentration of slum population while in eastern suburban part ward 58 (in the Topsia, Tangra locality), slum concentration was significant.

(It may be mentioned here that Ward 29 having high concentration of slums was selected in the present study for the household survey)



**Fig. 4**



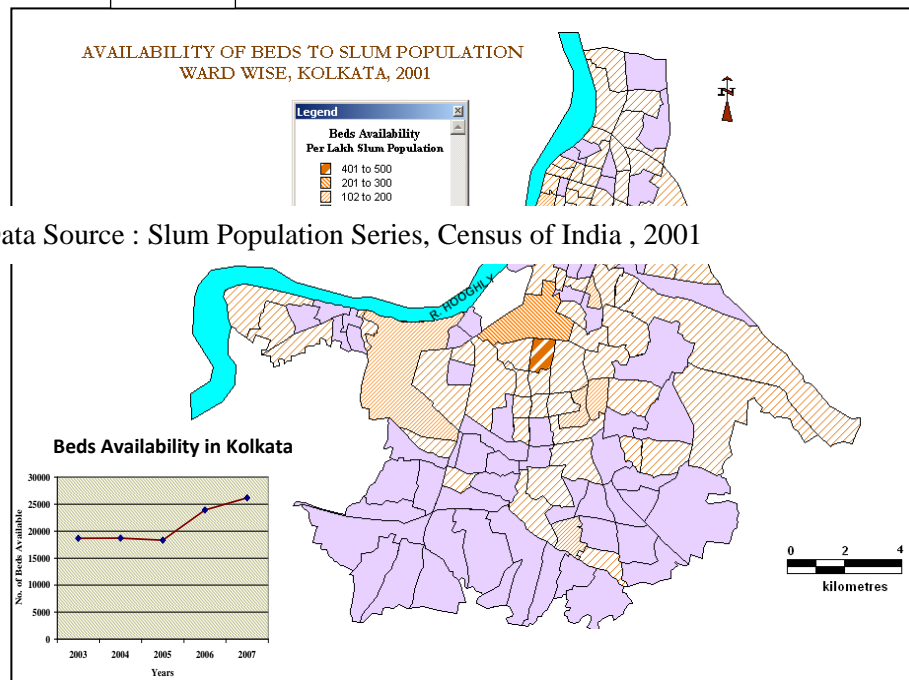
**Table 1 : Distribution Of Wards Under Different LQ Ranges**

LQ Range Categories	Ward Nos.	Total
High Concentration	29,58,65,134,135,136,137	7
Moderately High Concentration	6,3,13,14,28,30, 36,56,57,59,66,67,75,79,133	15
Moderately Low Concentration	1,4,5,7,9,15,19,21,24,31,32,33,34,35,37,38,39,44,64,74,76,77,78, 81, 85, 88, 90, 138,139,141	30
Low Concentration	2,10,11,12,16,17,18,20,22,23,25,26,27,40,41,43,46,48,49,51,52,53,54, 55,60,61,62,63,68,69,70,71,72,73,80, 82,83,84,86,89,91,92,93,94,97,98,100, 108, 117,118,120,123,131,132,140	55
No Slum Concentration	8,42,45,47,50,87,95,96,99,101,102,103,104,105,106,107,109,110,111,112, 113,114,115,116,119,121,122,124,125,126,127,128,129,130	34

Source : Computed by the author from Fig. 4 above

further, to assess the health infrastructural facilities available to the huge number of slum dwellers (as per 2001 Census data), attempts were taken to estimate the beds available per lakh slum population in different wards of Kolkata city. From the respective fig.5 (below) it was observed that majority of the wards have beds varying between 1 to 100 per lakh slum population.

Fig. 5



Data Source : Slum Population Series, Census of India , 2001

The wards having bed facilities ranging from 102 to 200 were few in number (only four). The number of beds available to per lakh slum dwellers above 200 was almost negligible. However, in absolute terms the number of beds in different health units increased markedly after 2003.

**Health Hazards Among the Slum Dwellers in the Slums Surveyed**

The slum where the major primary survey was carried out for the present study, all age group people (0-1 years, 1-12 years, 12-18 years, 18-45 years; 45-60 years and above 60 years) were considered to assess the health and nutrition status. The sex ratio was very high in the North Kolkata slum located in ward 29. Compared to south Kolkata slum that is located in Ward 116 (surveyed earlier in the year 2008) having sex ratio 932, this north slum had a higher sex ratio. The work participation rate was however found to be higher in south Kolkata slum compared to North Kolkata. This has resulted to higher dependency ratio in the North Kolkata slum compared to south Kolkata. The majority of the slum dwellers in Ward 29 were engaged as craftsman, drivers, shopkeepers, domestic maids and cobblers besides casual labourers .

The incidences of such diseases like malaria (vector borne), tuberculosis (air-borne), jaundice (water borne), bronchitis (also air-borne) were found to be high among the working age group belonging to 18-45 years. However, it was observed among the infants (with age varying between 0-1 years) and children (1-12 years) that they mostly suffer from fever; while the aged persons (with age above 60 years) mostly suffer due to Gastritis and ill digestion problem. Earlier study conducted at a South Kolkata slum in ward 116 revealed that the adult persons (with age 18-45 years) were also suffering from thyroid problem which was not found in case of north slum along the Narkeldanga main road.

A significant percentage of drivers suffer mostly by gastritis, malaria, diabetes, heart diseases, high blood pressure, tuberculosis and bronchitis. The high incidences of tuberculosis and bronchitis are likely to be high among the drivers because of the nature of their jobs. The drivers are constantly exposed to the risks of vehicular air pollution. The incidences of gastritis are relatively more common among business men and cobblers. A significant percentage of cobblers also suffer from malaria, diabetes, sinusitis and bronchitis problems. Under diarrhoea, the percentages of people who are mostly affected are engaged in construction works. These people also do suffer largely from sinusitis problem. Business man, attendants and domestic maids (primarily females) mostly suffer from

gastritis problems and high blood pressure. The incidences of cases being affected by high blood pressure are also high among the craftsmen (engaged in handicrafts).

The probable reasons of the presence of such high incidences of tuberculosis and bronchitis in the north slum may be due to vehicular congestion and hence automobile pollution (being situated along Narkeldanga Main road) Moreover the frequent uses of chullas by the dwellers in the houses and in the commercial food-stalls (which the dwellers run to earn income) might have worsened the air quality status of the locality. A number of small size factories are also located near this north slum, whose wastes get discharged in the nearby water-bodies deteriorating the water quality. This results in large number of cases under cholera - the disease which is not frequently found in South Kolkata slums.

#### ***Nutrition status of the Slum Dwellers***

The *Food Insecurity Atlas of Urban India* (MSSRF 2002) has estimated that Urban India has approximately 38 per cent of children below the age of three years in suffering from underweight problems and more than 35 per cent short for their age. The nutrition norms laid down by the Indian Council of Medical Research (ICMR) has become very difficult for the urban poor to meet. According to Ghosh and Shah, 2004, nutritional problems like protein energy malnutrition (PEM), anemia and vitamin A deficiency are much more common among the urban slum children compared to the rural children. The same source has inferred that poor maternal nutrition arises because of low birth weight, inadequate breastfeeding, delayed and insufficient complementary feeding. This may be due to inadequacy in the access to food, health, environmental and caring resources among the slums. Added to this issue is the lack of awareness and knowledge among the slum dwellers regarding the food requirements and lack of responsible adult care giver also results in high prevalence of malnutrition among young children.

In the north slum area, among the male residents, the proportion of underweight persons under different age groups viz. infants (0-1 years), children (1-12 years), adolescence (12-18 years), adults (18-45 years) and aged (above 60 years) were all high excepting the adults whose age vary between 45-60 years. Among the females, the percentage of underweights of infants (0-1 years), adolescence (12-18 years), adults (18-45 years) and aged persons (above 60 years) were also high compared to healthy, overweight and obese persons. Unlike the north slum, the situation in the south slum (survey done in the previous year-2008) is such that among the males, the percentages of healthy persons under different age groups like infants, children, adolescence, adults and old persons are all high compared to underweight persons. Similar to the male category, among the females also, excepting the children and the old persons, the percentage of slum dwellers was high among the healthy category than the underweight. The observation of greater number of people falling in the underweight category under the adult age group (among both males and females) in the north Kolkata slum is really striking because this group comprises the working force on whom the children and old persons depend. Therefore, if majority of the persons in the adult age group are underweight, the chances of people's physical ability to cope with different social and economic problems fall.

Among different category workers in the slum, it was observed that in the north Kolkata slum, the percentage of underweight is relatively high among the cobblers than other category workers. The earlier study of the south slum revealed higher percentages of underweight among the craftsmen, company workers, domestic maids and cobblers than other category workers.

#### ***Status of Basic Facilities in the slums***

Urban Squatter locales do not have adequate water supply and sanitation facilities. Some settlements have community toilets that are generally unacceptable. Hence in recent times also people in large numbers defecate in pits or in the open or in ditches, canals, or rivers creating a very polluted environment. The public health consequences are severe, especially for young children. (Fry, Cousins & Olivia, 2002). Regular collection of solid waste from the households seldom takes place in these localities. Accumulated waste creates huge amount of garbage which serve as work sites of



scavengers, (mostly children). Garbage dumps also act as breeding sites for rodents and insects, like mosquitoes, which carry dengue and malaria. According to Fry, Cousins & Olivia (2002), biomedical waste poses a special threat to the health of the urban poor.

Furthermore Kolkata suffers from the air pollution problems. The level of air pollution is much more than the maximum tolerance level as defined by World Health Organization. The increasing number of motor vehicles on road together with unregulated industrial activities that emits smoke and particles result in rising number of lung diseases among the city's residents. Having relatively poor means, the slum dwellers often do not get an easy access to adequate medical treatment and hence these disease become chronic among the poor slum residents.

Whether a group lives in urban poverty or not is influenced by such factors like marginalization, unawareness, illiteracy, class or caste status, and gender. Cities have "relative inequality," where poverty is not absolute but measured by the opportunities and resource differences between "haves" and "have-nots". This regional disparity in terms of opportunities and resource access was also observed when two consecutive studies were made in Kolkata - one in South Kolkata (in ward 116) in 2008 and another in Ward 29 along Narkeldanga main road in north Kolkata in 2009. The average family income in the north slum ranges between Rs. 700 to Rs. 18000/- while in the south slum the range varies from Rs. 1000/- to Rs. 16000. Depending on the income categories the proportion of medical expenses also vary from one income group to another. The lowest medical expenses was found among those who belong to below poverty level (Below Rs. 1000/- per family per month) while the highest medical expenses was observed among the income group with more than Rs. 10000/- per family per month income. Social and economic disparities weakens urban poor communities. A majority of urban poor households headed by women are compelled to earn a living for the family. This state has major consequences on the health status and mental development of small children. Small children are often engaged in the workforce who mostly works in the informal economic sector at the lowest paying.

Through primary household investigation, it was revealed that though the slum residents in both localities rely primarily on allopathic medicine, due to expensive allopathic treatment, a significant number of dwellers at present (10 to 15%) are presently relying on homeopathy medication. For emergencies the residents of North Kolkata slum mostly approach Nilratan Sarcar Medical College (NRS) located within a distance of seven-eight kms. from the locality. The slum dwellers consult the physicians occasionally (when the need arises). None of the dwellers go for regular health treatment. Further it was revealed from field survey that the awareness among the slum dwellers regarding the courses of vaccination (like BCG, TT, Polio & DPT) was quite impressive and almost 100% infants and children (among the households surveyed) were vaccinated depending on their respective ages. In the slum, the major sources of drinking water is tubewells (with depths varying from 400 to 500 ft.) and water supply by Municipal corporation at definite hours per day (three times - two hours in the morning, one hour at afternoon and 30 minutes at evening) through pipe lines. Due to inadequate number of public latrines in the slum till date a significant number of slum dwellers (around 70%) depend on open air defecation thus polluting the local environment.. The private latrine use among the slum dwellers is almost negligible.

#### **Governmental Measures to tackle Health Problems in General**

For the eradication of poverty the State Government so far has proposed and implemented a number of policies. In most of the cases the programmes are targeted at the slum dwellers. Infectious diseases like diarrhea, ARI and measles results into malnutrition problems among the children. overcrowded housing in the cities has lead to major deterioration of the health condition among the urban poor. Thus improvement of environmental sanitation, provision of safe drinking water and modification of personal hygiene and health seeking behaviors are the basic requirements to improve health and nutritional status of urban poor. Infact, any nutritional program may fail under the in absence of proper sanitation, proper health care and proper personal hygiene.

The standard of living of the slum dwellers was a concern even during colonial rule. However, only after the formation of the Calcutta Improvement Trust in 1913 some initiatives were taken for 'area

development' and slum clearance, which is absolutely needed to offer the urban slums a healthy environment to live in.

In the north Kolkata slum surveyed during the present study, the benefits of Kolkata Slum Improvement Project (SIP) was noticed where a good number of community latrines were constructed to tackle the environment pollution problem in the slums. A small number of slum dwellers (with age above) in both the localities were getting some financial benefits under the National Old Age Pension Scheme. The percentage of these category people is around 3% in the north slum and around 2% in the south slum. 2% of the pregnant women in the south slum has also get financial benefits under the National Maternity Benefit Scheme (NMBS). Moreover under the universal immunization programme in both the slums 100% infants and children have been covered for vaccination at their different ages.

In spite of so many programmes initiated by the State Government for the Slum Improvement, *Kolkata Slum Improvement Project (SIP)*; *the EIUS (Environment Improvement In Urban Sector)* ; *Neheru Rozgar Yojana (NRY)* in 1989 ; *Prime Minister's Integrated Urban Poverty Eradication Programme (PMIUPEP)* in 1994 ; these the *National Slum Development Programme (NSDP)*, *National Old Age Pension Scheme (NOPS)*; *the National Maternity Benefit Scheme (NMBS)*; *the Family Benefit Programme* (aimed at Below the Poverty Line category) due to absence of proper institutional arrangements and lack of convergence efforts of different departments of Kolkata Municipal Corporation (KMC), the progress of all these schemes are not very impressive. .

#### CONCLUDING REMARKS

The present micro level study has tried to assess the status of slum environment in terms of health hazards and health care facilities available to slum dwellers in the Kolkata city based on a sample study of a north Kolkata Slum located in Ward 29 along Narkeldanga main road . Comparisons regarding health and nutrition status of this slum dwellers were made with a South Kolkata slum (located in ward 116). It was observed that marked differences lie across the slums in terms of income, provisional facilities of drinking water, sanitation and living conditions. In general however, the stressful living conditions in slums pose a direct bearing on the strength of body and mind. The unacceptable environmental and economic conditions result in malnutrition problems among different age group people in the localities. Due to poor hygiene conditions the incidences of such diseases as diarrhea, jaundice, and cholera are relatively high in slums compared to non-slum areas. The observations from the slums in Kolkata even in the last five years from 2015 onwards is that the overall conditions for living has not improved much in the last two decades and the slum residents are increasingly getting affected by such respiratory diseases as bronchitis, asthma, acute respiratory infection, tuberculosis, lung and heart diseases owing to rising levels of air pollution in the city. The number of vector borne diseases like Dengue is also found frequently among these dwellers. Due to absence of open spaces in the slum locales (because of overpopulation and congestion) majority of the children suffer from developmental complexes and physical imbalance.

The preliminary observation on the status of institutional medical facilities available to the slum dwellers in Kolkata city is still very inadequate. Hospitals, health care centres and charitable dispensaries offer meager assistance and the slum residents have to remain satisfied with such kind of scanty services. The growing dependence on western medicines (under allopathic medication) also compels the poor dwellers to shift to other types of medication like homeopathic and ayurvedic. However, from self medication to a full fledged disease care, the familial support plays the most vital role as an informal care-giving unit.

In recent years (last 15 to 20 years), the Central and the State Governments have undertaken a number of programmes for the improvement of the urban poor. However, due to lack of institutional arrangements and coordination among different departments of the Kolkata Municipal Corporation the performance and the progress of these schemes is not very impressive. Promotion of private-

public partnerships along with self help group activities are expected to solve the local problems especially in slums to some extent.

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