A Pathology of Living Environ and its Concomitant Effects on the Health of Slum Dwellers in Chennai City, Tamil Nadu State

S. John Kaviarasu, Ph.D Research Scholar, Department of Social Work, Loyola College, Chennai

Abstract

With every passing year, urban hubs in Tamil Nadu state seem to be proliferating with slums. This is due to the heavy influx of migrants from rural areas to cities in search of livelihood. Chennai being one of the fastest growing major metropolises of India, bears the maximum brunt in the mushrooming of slums among, than other cities. Generally, people in slums face plethora of problems like improper sanitation, unhygienic environmental conditions, social, economic, health, educational and cultural problems, but the main problem they face are health-related. The air and water pollution are the main irritants the slum people face which leads to their various health problems. To study the impact of the pollution on the health of the slum dwellers, a preliminary survey was conducted to collate information on this. Additionally, secondary data was also obtained to supplement the efforts to this end.

The primary focus of the study highlights factors affecting the health of the people in slums. The study comes out with the personal practices by the slum dwellers in the areas of sources of water for domestic usage and measures taken for safe drinking, practice of sanitation and hygiene, knowledge about hygienic latrine, and the most affected diseases among children.

It also focuses on problems associated with poor living condition and its impact on health of the slum dwellers. The initial data analysis reveals that the lack of basic amenities like safe drinking water, proper housing, drainage and excreta disposal services cause the slum population vulnerable to infectious diseases. Added to that, poor sanitary conditions and poor water quality also cause for the water borne diseases, affecting the life expectancy of slum dwellers. Diarrhea is chiefly affecting the children under the age of five and this is the main reason for their absence to schools. It is suggested that if the conditions in slums are improved, health status of the people will also be elevated. Hence this study stresses the crying need to improve sanitation, drinking water facility at slums with joint participation of government, private organizations and non-government organizations in Chennai.

Keywords: Pathology, Health, Health Problem, Ill-health, Migrants, Living Conditions, Slums, Slum dwellers

Introduction

“Health is a universal human aspiration and a basic human need. The development of society, rich or poor, can be judged by the quality of its population’s health, how fairly health is distributed across the social spectrum, and the degree of protection provided from disadvantage due to ill-health” said by Professor Sir Michael Marmot1. The health status of people worldwide has undergone a drastic change in recent years. According to World Health Organization (WHO), approximately two million children die of diarrheal each year. While the slum people lack the proclivity to take simple steps to improve their lives, the government machinery also should galvanize into action to bring about changes in the slum environs.

Statement Of The Problem

Not only the developed countries, but also the developing countries and less developed countries are seriously facing the problem of slums2 and there is no panacea to eradicate the same from the surface of the earth. Series of health problems emerge in slums due to either absent or inadequate basic service provisions. Mainly lack of clean, sanitary environment and garbage disposal pose series of threats to the health of slum dwellers. Research paper on background note on health in urban slums in Delhi by Suchi Pande3 specified that ‘the demands for basic services to slum dwellers is lacking so much, because, there is no single organizations to assess the needs and on that basis identify and fulfill the demand’ on a permanent and sustainable basis. As a result, the slum dwellers see the uselessness in expressing their demands to those with the capacity to fulfill them.

“There are four broad classifications of proximate causes for ill health in urban slums”4. They are as follows:

---

1Interim Statement of the Commission on Social Determinants of Health by Professor of Epidemiology and Public Health at University College, London.
2 Slums are described as the dark spots on our grossly over populated urban areas and treated as non-required element of the system
3 Project Coordinator, Institute of Social Studies Trust (ISST), New Delhi
a) **Lack of adequate basic services** such as toilets, bathing units, garbage disposal outlets, and clean drinking water.

b) **Lack of information** dissemination about government health care delivery systems so as to enable the slum community to access treatment for diseases.

c) **Inadequate and non-nutritious food intake** - that weakens the immune system thereby making the body vulnerable to varied opportunistic infections.

d) **Lack of financial resources** - impeding access to medical care

In addition to the factors mentioned above, other common problems of the slum dwellers are lack of drainage connections, sub-standard housing facilities, overcrowding, unhygienic environment due to garbage dumping, overflowing of sewage and so on. These point to the serious gap in proper waste management and sewage treatment which need to be addressed with immediate effect.

“Major problems of urbanization in India” are urban sprawl, overcrowding, housing, unemployment, slums and squatter settlement, transport, water, sewerage problems, trash disposal, urban crimes and problems of urban pollution.

There are two rivers that flow through Chennai city – Cooum and Adyar. Both of them are highly and heavily polluted. In Chennai city, “the Cooum river flows through three corporation zone – Kilpauk, Nungambakkam and Triplicane for a total length of 16 kms”.

There are two rivers that flow through Chennai city – Cooum and Adyar. Both of them are highly and heavily polluted. In Chennai city, “the Cooum river flows through three corporation zone – Kilpauk, Nungambakkam and Triplicane for a total length of 16 kms”. Cooum is presently a river spoiled by filth and pollution, and the water quality is considered to be highly toxic and completely non-potable. The Cooum in particular is severely polluted with effluents from many factory units and plastic bags and sewage disposed by slum people living on its banks. Adyar River, originating near the Chembarambakkam Lake in Chengalpattu district, is one of the two rivers which winds through Chennai (Madras), Tamil Nadu, India and joins the Bay of Bengal at the Adyar Estuary. Most of the waste from the city is drained into this river and the Cooum.

As the years role on, housing in slums becomes one of the important and major health concern because of the people residing in sub-standard settlements in Chennai city live in over-crowded situations. People living in slums face problems of housing, access to drinking water and sewage facilities. The studies done across various parts of slum in the city of Chennai reveal that ‘two thirds of households have simple one-room structures and a majority of them with dirty floors and poor ventilation’. Such overcrowding lead to rapid spread of respiratory and skin diseases. Access to drinking water is another major problem for the people living in slums. The series of research undertaken over the years by social workers, NGOs and the government of Tamil Nadu give a shocking message that ‘more than two thirds of slum residents lack access to safe drinking water’. The lack of safe drinking water facilitates the spread of water borne diseases. The presence of stored water promotes the breeding of mosquitoes due to which people run the risk of acquiring diseases such as malaria, filariasis, diathrea and a host of diseases.

‘Mundane needs and activities such as bathing, garbage disposal, drinking water, and defecation are daily battles for the slum dwellers. Garbage and human waste invariably ends up in the same water used for bathing and drinking, promulgating a vicious cycle of parasitic and communicable disease’. ‘Sangam India’ through its research says that ‘lack of available latrines is a major health problem as well. It is estimated that one third of slum households have no access to sanitary latrines end up with open defecation that could lead to spread of fecal-oral disease and parasitic infestation’.

**Need For The Study**

Housing is the key factor to the overall physical well-being of slum dwellers, but it is at present very poor. A significant portion of the Chennai’s urban slums on the side of these rivers whose water is already polluted. Hence the environment factor is one of the main issues that should be improved for the health of the slum population. The squatter figures along waterways in Chennai have been studied by the TNSCB and the PWD in a joint survey. As the statistics then showed, there were 33,313 families on the three riversides in Chennai. This

---

5 Smriti Chand has written an article on Urbanisation and enlisted the problems of urbanizations in India.

6 The fourth largest metropolitan area in India and the 30th in the world in terms of population (as of 2010).

7 The Cooum River is a polluted river which ends in the city of Chennai (formerly Madras) draining into the Bay of Bengal.

8 Adyar River receives a sizeable quantity of sewage from Chennai and drains into the Bay of Bengal. Rapid industrialization and urbanization has led to severe contamination of this river.


10 Housing generally refers to the social problem of insuring that members of society have a home to live in, whether this is a house, or some other kind of dwelling, lodging or shelter.

11 The word sangam means Confluence in Sanskrit, the ancient classical language of the India Sub-continent. Sangam India is funded entirely by donations from within India and United states and currently seeking non-governmental organizational status.

12 Tamil Nadu Slum Clearance Board

13 Public Works Department of Tamil Nadu in Chennai City

14 These statistics pertain to the year 2001.
is existence of more than a tenth of the total slum population in Chennai on these banks means serious health issues. Apart from the fact that the environment around these rivers affects slums holistically, the PWD has identified 8,164 families, from all the three riversides as impeding desalination activities on the rivers. That explains how these families have encroached into the relatively dry areas of the rivers, and need immediate attention.

From the health perspective, ‘water borne diseases are highly prevalent among these families, and carriers like mosquitoes could bring more ones like malaria into the lives of any of these 1,00,000 plus dwellers on the riversides. The TNSCB claims that it is rehabilitating all the families alongside the rivers in phased manner’.15

Public sanitation demands next priority. As of 2000, 65.7% of slums had sanitation facilities (both urinals and toilet seats inclusive) while the rest 34.3% were defecating in the open, causing health concerns16. Though the water is available for drinking which is supplied by the Chennai Corporation in all over Chennai, safe drinking water is still a deep concern in Chennai slums. In this existing situation, the health of the slum dwellers is a major concern which needs the attention of the government, Chennai corporations, bureaucrats and health practitioners.

Hand pumps are the most common source of drinking water to slum dwellers and are largely accessible within half a kilometer distance in most of the slums. However, the assumption that hand pump water is safe is itself risky to sustain. Contamination of water, effluent mixing, ground water becoming saltier, and sewage seeping, are all but issues of proximate relevance to the quality of drinking water. Slum dwellers are more vulnerable to the dangers that lie here because of the fact that many households have improper cooking facilities, leading to direct consumption without boiling.

Garbage disposal has recently enjoyed the great attention of the Corporation. It is without doubt that it is an equally important health issue, in as much as sanitation or dwelling conditions, if not greater. There seems to be a holistic approach to garbage disposal and management by the Corporation – as a phenomena requiring attention not just from the slum perspective – but as something of interest to the entire city. It is clear that slums suffer from problems that are beyond economic in nature. Therefore the need has arisen to find out in a scientific way for the living and also health condition of slum dwellers in Chennai.

Objectives

a) To identify the general health status of the people in slums.
b) To study the reasons for the unhygienic conditions in slums.
c) To find out the cause for the spread of communica-ble diseases.

Definition Of Terms

Pathology: The branch of medical science that studies the causes and nature and effects of diseases.
Health: The state of being free from illness or injury
Health problem: A problem that affects someone’s health, but it is a physical condition caused by disease.
Ill-health: It is state of poor health in which someone is unable to function normally and without pain.
Migrants: Migrants refer to someone who has emigrated from one region to another region for the purposes of seeking employment or improved financial position.
Living Conditions: The condition or action of maintaining life.
Slums: A heavily populated urban area characterized by substandard housing and squalor. Slums are described as the dark spots on grossly over populated urban areas and treated as non-required element of the system.
Slum dwellers: A heavily populated urban area characterized by substandard housing and squalor.

Field Of Study

The universe of this proposed study was the people living in slums that came under Zone - 8 of Corporation of Chennai. This proposed study was conducted to particularly find out the living condition of the people and many health hazards existing in slums.

Research Design

Descriptive design was employed to actually narrate the situation and the living conditions of people in slums. Health was the major focus of the study which was analyzed in detail by adopting descriptive research design.

Sampling

The study was conducted in 10 slums in the city of Chennai. They are namely Jayalakshmi puram, Gangai karai puram, Boobathinagar, V.P.Singh Nagar, Pullupuram, Ajis Nagar, Muthumariammman Nagar, Valliammal Thottam, Anjukudisai in Chinthathripet, Amma Nagar in

15 See Policy Note 2002-03, Demand Number 25, TNSCB.
16 See, Chandramouli, op.cit.
Chinthathripet). In each slum, a sample 20 households were identified and interviewed. Interview was carried out with either male or female adult persons available in the house at the time of enumeration. Samples were collected in all the five slums based on the convenience of the people. Hence, the researcher has applied convenient sampling to collect the data from the population.

**Data Collection**

Sources of data collection consist of mainly primary and secondary sources.

a) The Primary Source for the collection of data was the interview schedule. The researcher has collected the required data of information straight from the respondents by interviewing them through a structured questionnaire.

b) The Secondary Source for the data was collected from books, articles, magazines, newspapers and websites.

**Limitation Of The Study**

The respondents interviewed were mostly women who lacked the basic information. Certain questions were difficult for them to understand. Some respondents were not cooperative and hence their reply was lethargic.

**Results And Discussion**

**Table: 1 Disease Felt as the Greatest Illness in Slums**

<table>
<thead>
<tr>
<th>Diseases</th>
<th>Frequency</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaria</td>
<td>130</td>
<td>65</td>
</tr>
<tr>
<td>Typhoid</td>
<td>48</td>
<td>24</td>
</tr>
<tr>
<td>Filariasis</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>200</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

It is found that 65 percent of the respondents considered malaria as the predominant disease followed by typhoid and filariasis.

**Table: 2 The Most Affected People in Slums**

<table>
<thead>
<tr>
<th>Affected people</th>
<th>Frequency</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior citizens</td>
<td>104</td>
<td>52</td>
</tr>
<tr>
<td>Women</td>
<td>46</td>
<td>23</td>
</tr>
<tr>
<td>Children</td>
<td>36</td>
<td>18</td>
</tr>
<tr>
<td>Men</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>200</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

It is found that 52 percent of the respondents agreed that senior citizens were the most vulnerable to diseases. Women and children were listed as the next affected.

**Table: 3 Most Affected Diseases among Children**

<table>
<thead>
<tr>
<th>Most Affected Diseases</th>
<th>Frequency</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diarrhea</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>Typhoid</td>
<td>48</td>
<td>24</td>
</tr>
<tr>
<td>Cholera</td>
<td>24</td>
<td>12</td>
</tr>
<tr>
<td>Primary complex</td>
<td>28</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>200</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

It is found that Diarrhea is the disease that most affected the children with almost 50 percent while typhoid and primary complex were mentioned as the next, followed by cholera.

**Table: 4 Source of Water for Domestic Usage**

<table>
<thead>
<tr>
<th>Source of water</th>
<th>Frequency</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public taps</td>
<td>110</td>
<td>55</td>
</tr>
<tr>
<td>Water tank</td>
<td>70</td>
<td>35</td>
</tr>
<tr>
<td>Tanker</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>200</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

It is found that Public taps are the most common source of water with 55 percent respondents mentioning it. This was followed by water from tank and from tanker lorries.

**Table: 5 Measures Taken for Safe Drinking**

<table>
<thead>
<tr>
<th>Measures taken for safe drinking</th>
<th>Frequency</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No precautionary</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>Boil</td>
<td>72</td>
<td>36</td>
</tr>
<tr>
<td>Filter with cloth</td>
<td>28</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>200</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

It is evident that 50 percent of the respondents are still unaware of the water borne disease and do not take any precautionary measures for safe drinking. 36 percent of the respondents boil the water while 20 percent prefer filtering.

**Table: 6 Disposal of Waste**

<table>
<thead>
<tr>
<th>Disposal of Waste</th>
<th>Frequency</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Throw away on coovum river, railway tracks</td>
<td>52</td>
<td>52</td>
</tr>
<tr>
<td>Dumping</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Dustbins</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>200</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

It is evident that 52 percent of the respondents throw away the wastages either on the banks of Coovum or at the adjacent railway tracks. 40 per cent of the respondents prefer dumping the wastages at the nearest place available. Only 8% of them prefer dust bins, if available.
Recommendation And Conclusion

- The slum population along the banks of the rivers and canals require special attention by the corporation of Chennai from the health point of view.
- The disposal of garbage and maintaining cleanliness along water channels should be given foremost importance not only by the Chennai Corporation, but also by every individual.
- Primary health care should be further enhanced with frequent health visits by health visitors.
- It is better to promote mobile toilets in the slum community which will avoid open defecation.
- It is high time to review the condition of public toilets in Chennai slums which are in bad condition, poor maintenance and most of the time; it is becoming a breeding place for mosquitoes and birth of diseases.
- Health intervention helps to reduce the unhygienic living condition of the community people and reduces the vulnerability. Hence it is suggested that if the conditions of the slums and the people are to be improved, the problem of poor living conditions should be addressed first and then the health service needs should be fulfilled through application of proper measures and planning by the different sectors of government, private sectors and non-governmental organizations.

References:


[16] www.chennaislums.com

[17] www.tamilnaduslumclearanceboard.com

[18] www.tamilnaduwomen.org


[27] http://www.wpro.who.int/health_research/documents/dhs_hr_health_in_asia_and_the_pacific_07_chapter_2_social_determinants_of_health.pdf?ua=1


[34] http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2912715/