

**Environmental Pollution In Urban Slums And Its Impact On Women's Health – A Sociological Study**

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**Abstract**

The concept of environment refers to all sorts of surroundings and includes material, social and spiritual conditions of living beings. The human causation of environmental problems may be clarified by the difference between natural and environmental catastrophes. Former being a dramatic change of the environment caused by natural process without human interventions and the latter changes are caused primarily by human interventions. The three broad categories of environmental problems are exhaustion, pollution and disturbance. An attempt has been made in this paper to discuss the process of interaction across urbanization, proliferation of slums and the environmental pollution in the form of pollution of Air, Water, Soil and Noise due to enormous increase in vehicles, discharge of effluents by industrial units and generation of solid waste which has received the maximum attention of environmental scientists and town planners today.

**Keywords:** Environment, pollution, urbanization, slums, air, water, soil, noise, solid waste

**Introduction**

One way of defining health is that health is a state of complete physical, mental and social well-being and not merely absence of disease or infirmity (WHO-1946). Disease, or illness then, may involve a temporary or permanent impairment in the functioning of any single component or of the relationship between components making up an individual. Any impairment, leads to a decrease in a person's ability to function efficiently in day-to-day situation. Sociology as a science of human behaviour tells us that a person's state of mind depends upon and determined by his/her social relations with others. Slum as a social disorganization, social relations have been the casualties. We believe the slum populations are increasingly vulnerable to and might actually suffer from serious psycho-somatic disorders let alone other disorders. An attempt is made in the present study to study the nature of diseases, distribution of diseases, causes and consequences of diseases among slum population in general and women in particular and the social consequences of such diseases and high health risk behaviour of slum population on a wider society – the urban living environment. On the basis of field studies conducted in few slums spread across the Bangalore city, an attempt has been made in this paper to discuss the process of interaction across urbanization, proliferation of slums and the environmental pollution in the form of pollution of Air, Water, Soil and Noise due to enormous increase in vehicles, discharge of effluents by industrial units and generation of solid waste which has received the maximum attention of environmental scientists and town planners today.

**Objectives**

1. To study the living conditions of slum dwellers in Bangalore city
2. To study the reasons for environmental hazards
3. To study the impact of environmental pollution on health conditions of women

**Methodology**

The study is based on primary data, Interview Schedule, Case study and observation method. Further secondary data also being drawn from subject related textbooks, newspapers, census reports, Journals and related study materials. Further, data analysis comprising tables and cross-tables on different variables and field observations have been used for describing the study of this paper

## **Description**

It is impossible to prevent all environmental problems. Human beings cannot live without changing their environment. Human beings have to change their environment to protect themselves against climatic influences like high or low temperatures, precipitation, sunshine, wind and floods and against poisonous plants and dangerous animals. They also have to provide themselves with food, water, materials and heat. It is unavoidable that these types of human changes in the environment are sometimes interpreted as problematic. However, there are three major factors which contribute to the growing impact of human behaviour on the physical environment:

- Increasing numbers of people
- Growing quantity of human use of the environment
- Changing quality of human use of the environment

Larger the growth of population, larger will be environmental problems too an account of various economic activities. Western countries are no exception to this. Population growth is a major cause of increasing environmental stress. It is not only the growing numbers of people but also the growth of their per capita use of environmental resources contributes to contemporary environmental problems. In general, economic growth leads to a larger utilization of natural resources. There is often a strong correlation between economic growth and growth of energy use and hence, economic growth together with population growth, has often been considered as a major cause of environmental problems.

The production of economic goods and services may be associated with widely different quantities of materials used and pollutants emitted. According to Barry Commoner, there is striking evidence that production of most basic needs - food, clothing, and housing - consumed 40 to 50 percent of resources. Increase in population led to changes in the manner in which we use resources. The kind of goods produced to meet these needs have changed drastically. New production technologies have displaced old ones. Soap powder has been displaced by synthetic detergents; natural fibres (cotton and wool) have been displaced by synthetic ones; steel and lumber have been displaced by aluminum, plastics, and concrete; railroad freight has been displaced by truck freight; returnable bottles have been displaced by non-returnable ones. On the road, the low-powered automobile engines of the 1920's and 1930's have been displaced by high-powered ones. On the farm, while per capita production has remained constant, the amount of harvested acreage has decreased; in effect, fertilizer has displaced land". (*Commoner, 1971, pp.141-142*)

In addition, the most pressing environmental driven health problems today is in terms of disease, illness, disabilities and even death are associated with poor households and communities in the developing world. In rural areas and in the peri-urban slums of the developing world, inadequate shelter, overcrowding, lack of adequate safe drinking water and sanitation, contaminated food, and indoor pollution are by far the greatest environmental threats to human health. These conditions are often compounded by poor nutrition and lack of education, which make people more vulnerable to, and less able to cope with, environmental threats. According to WHO and the World Bank, environmental improvements at the household and community level would make the greatest difference for global health. Specifically, the World Bank has calculated that improvements in local environmental conditions facing the poor could lower the incidence of major killer diseases by up to 40 percent.

Many of the interventions particularly in the domain public health rely on changes in behaviour and improvements in the environment at the household level, because a large share of disease is incurred in or around the home environment. For instance, even if water supplies are clean at the public tap, they can become contaminated if stored in an unhygienic manner. This reality makes the role of public policy difficult, since policies are generally directed toward the public domain. One key role for public action is investment in health and hygiene

education. Several studies have shown that the promotion of hand washing, for instance, can drastically reduce the incidence of diarrheal diseases. In addition, abundant evidence has made it clear that educating women more broadly has an immediate positive effect on health.

**Interpretation**

**A. Living space**

Table 1-Living Space

Sl No	Name of the slum	10X10	Percent	15X10	Percent	20X20	Percent	20X15	Percent	10X30	Percent	20X30	Percent	20X10	Percent
1	B. Nagar	4	8	8	16	19	38	0	0	0	0	19	38	0	0
2	R. Nagar	5	10	25	50	7	14	11	22	1	2	1	2	0	0
3	P. Palya	28	56	19	38	3	6	0	0	0	0	0	0	0	0
4	A. Nagar	2	4	8	16	10	20	6	12	1	2	20	40	3	6
5	C. Nagar	1	2	5	10	7	14	6	12	0	0	24	48	7	14
All slums		40	16	65	26	46	18.4	23	9.2	2	0.8	64	25.6	10	4

Table 1 reveals that 16 percent of the sample has very small living space of 10X10. 26 percent of the sample has living space of 15X10 and almost similar percent i.e. 25.6 percent has living space of 20X30 of which is the highest space. The remaining sample falls in the range as follows: 20X20 (18.4%), 20X15 (9.2%), 30X10 (0.8%) and 20X10 (4%). Almost half of the sample owns the houses they are living in i.e. 51.6% and the remaining sample i.e. 48.4% are in rented houses.

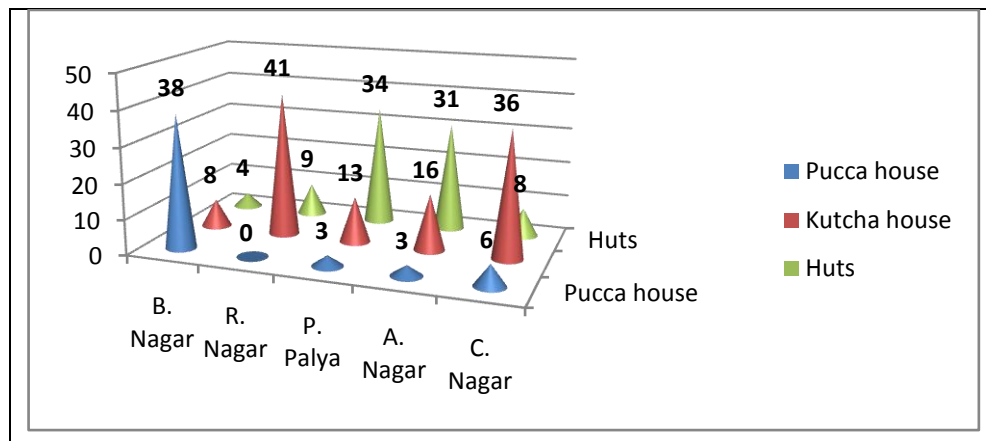
**B. Housing**

Housing for the millions of homeless people in India has not been a high planning priority. Consequently, at the turn of the century, India will be short of 41 million houses. Can everyone in India be adequately housed? This is one of the hotly debated questions Experience shows no one sector can solve the problems. While the State has failed to meet its primary responsibility of building houses for the poor, the private sector has done little better, building only for profit and for a few.

Table 2 - Housing Conditions

Sl.	Name of the Slum	Pucca house	Percentage	Kutcha house	Percentage	Huts	Percentage	Total
1	B. Nagar	38	76	8	16	4	8	50
2	R. Nagar	0	0	41	82	9	18	50
3	P. Palya	3	6	13	26	34	68	50
4	A. Nagar	3	6	16	32	31	62	50
5	C. Nagar	6	12	36	72	8	16	50
All slums		50	20	114	45.6	86	34	250

Figure-2 Housing condition



Housing conditions constitute another important variable. Inadequate housing stock and poor housing conditions create lot of environmental hazards. Poor families often lack the resources that they are unable to avoid situations which might be degrading of their environment. Poor people in crowded squatter settlements frequently endure inadequate access to safe drinking water. Lack of potable safe drinking water forces them to depend upon and overdraw by over-pumping and depletion of ground water. In latest comprehensive large scale sample survey on housing conditions was carried out by NSSO (National Sample Survey Organization) during January and June 1993. 49<sup>th</sup> round in both rural and urban area with a sample of 1,19,403 Household, 75,036 from rural sector 44,367 from urban sector. Some of the key results of the survey are as follows: In the rural sector the share of kutcha, semi-pucca and pucca houses were 32% each respectively whereas in urban sector about 75% Households pucca houses. However, in the present sample 46% reside in kutcha houses only 20% reside in pucca houses and 34% are in huts which do not go in line with the survey report.

**Inadequate supply:** It soon became obvious that the supply of government built low-income housing was hopelessly inadequate in relation to demand. Forced to fend for themselves, the city's poor had no choice but to encroach on vacant plots or footpaths or the strips of land along the railway tracks. They built their own *jhopdis*, looked out for themselves and managed somehow. Such encroachments were immediately dubbed "illegal", as indeed they were. But where were the poor to go? (*Survey of the Environment, housing for urban poor, 1996*)

### C. Disposal Of Waste

Though the Corporation is making efforts by launching projects exclusively to improve the garbage disposal called 'Swacha Bengaluru' and 'Nirmala NagaraYojane' with the involvement of voluntary organizations both in the city limits and also in the CMC areas, still a lot of improvement is needed in this direction.

Table 3 - Disposal of waste

Sl No	Name of the Slum	In front of the house	Percentage	Back side of the house	Percentage	Public dust bin	Percentage	Drainage/ Gutter	Percentage	Open space	Percentage	Drainage/ Gutter & Open space	Percentage
1	B. Nagar	5	10	1	2	17	34	7	14	20	40	0	0
2	R. Nagar	0	0	0	0	6	12	0	0	44	88	0	0
3	P. Palya	2	4	0	0	11	22	6	12	30	60	1	2
4	A.J. Nagar	0	0	1	2	10	20	2	4	34	68	3	6
5	C. Nagar	1	2	1	2	8	16	0	0	38	76	2	4
All slums		8	3.2	3	1.2	52	20.8	15	6	166	66.4	6	2.4

Figure-3 Disposal of waste

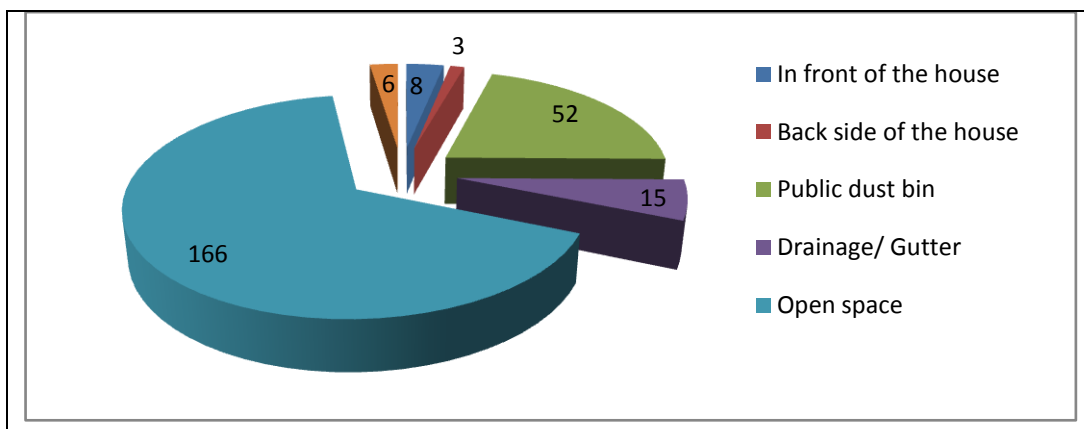
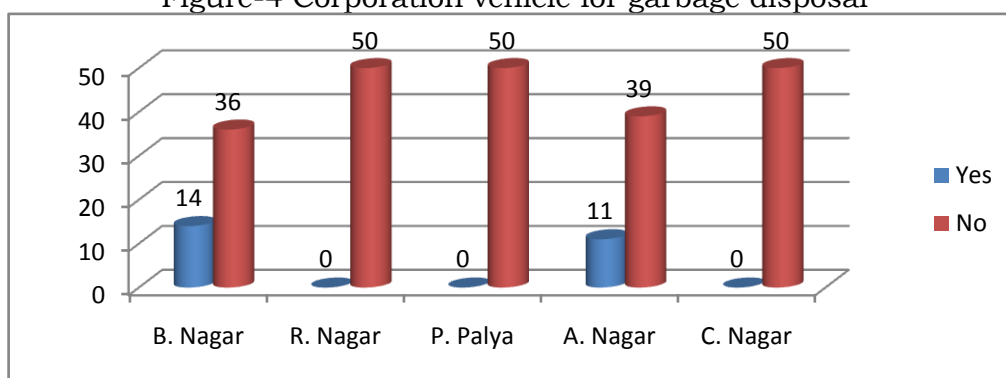


Table-3 and figure -3 exhibits that majority of the sample i.e. about 74.4% throw the waste either in open space or gutter. This is the sad state of affair which is affecting the city environment to the maximum extent. The possible reasons for this may be lack of efforts from the Corporation to collect the garbage especially from the slums, lack of infrastructure necessary for the garbage disposal, lack of awareness among the slum people about dangers posed by un-disposed accumulated solid waste.

Table 4- Corporation vehicle for garbage disposal

Sl. No	Name of the Slum	Yes	Percentage	No	Percentage
1	B. Nagar	14	28	36	72
2	R. Nagar	0	0	50	100
3	P. Palya	0	0	50	100
4	A. Nagar	11	22	39	78
5	C. Nagar	0	0	50	100
All slums		25	10	225	90

Figure-4 Corporation vehicle for garbage disposal



Fromtable-4 and figure-5 reveals that only two out of five sample slums are getting the Corporation vehicle for garbage collection whereas, the remaining three are devoid of this facility. In those two slums also only 28% and 22% of the people are disposing garbage through the Corporation vehicle which indicates that the coverage is not exhaustive and that the residents are not aware of the advantages of disposing the waste through the vehicle provided by the corporation.

#### D. Personal Hygiene

Table-5 Women taking bath (during pregnancy)

Sl No	Name of the slum	Every day	Percentage	Two days once	Percentage	Weekly twice	Percentage	Weekly once	Percentage
1	B. Nagar	1	2	23	46	26	52	0	0
2	R. Nagar	18	36	14	28	18	36	0	0
3	P. Palya	21	42	18	36	11	22	0	0
4	A. Nagar	1	2	27	54	22	44	0	0
5	C. Nagar	0	0	19	38	16	32	15	30
All Slums		41	16.4	101	40.4	93	37.2	15	6

Particularly in the slum this question assumes special significance. Table-5 shows that nearly 40% of the sample take bath once in two days, 34% take bath three times in a week. Awareness is there but due to lack availability of water and lack of facilities to take bath like bath rooms appear to be major constraints. Mere awareness is not sufficient to be able to translate this awareness into actual behaviors; people require sufficient resources. Given the rapid increase in the size of the slum population, Government often found it increasingly difficult to mobilize sufficient funds to provide all these facilities. The answers to social

malady lies in preventing the people migrating from villages to city. There is, therefore an urgent need to promote the development of small towns and medium towns but, also to promote development of villages, to divert funds from the so called city centered development activities, to decentralized development activities across the villages.

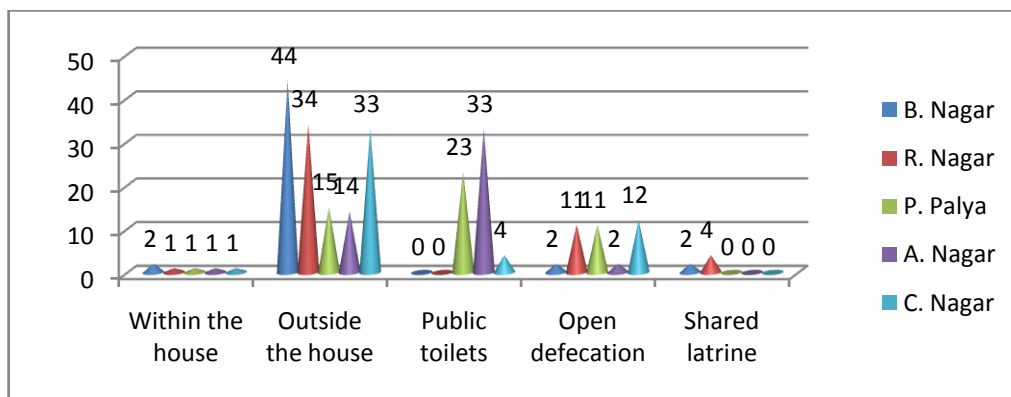
**E. Latrine (Toilet) Facilities**

Table 6 - Availability of latrine (toilet) facilities

Sl.No	Latrine facilities (toilet)	Yes	Percentage	No	Percentage
1	B. Nagar	48	96	2	4
2	R. Nagar	36	72	14	28
3	P. Palya	38	76	12	24
4	A. Nagar	48	96	2	4
5	C. Nagar	38	76	12	24
All slums		208	83.2	42	16.8

Table 7- Type of latrine (toilet) facilities available

Sl No	Name of the slum	within the house	Percentage	Outside the house	Percentage	Public toilets	Percentage	Open defecation	Percentage	Shared latrine	Percentage
1	B. Nagar	2	4	44	88	0	0	2	4	2	4
2	R. Nagar	1	2	34	68	0	0	11	22	4	8
3	P. Palya	1	2	15	30	23	46	11	22	0	0
4	A. Nagar	1	2	14	28	33	66	2	4	0	0
5	C. Nagar	1	2	33	66	4	8	12	24	0	0
All slums		6	2.4	140	56	60	24	38	15.2	6	2.4



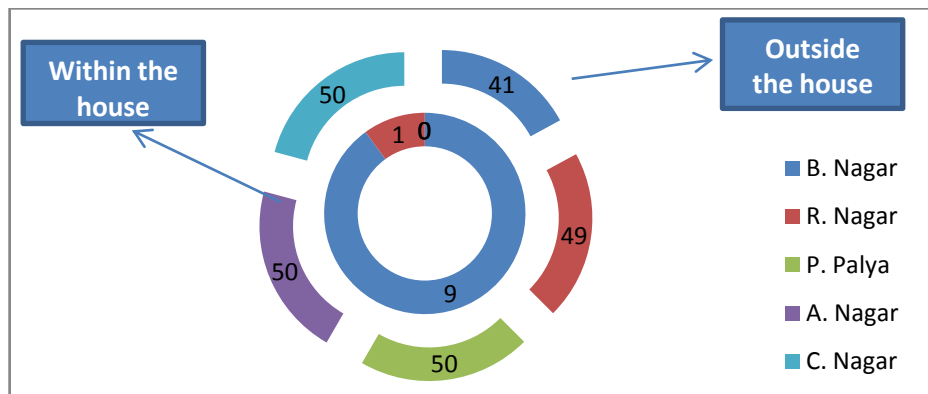
From the point view of clean environment, community hygiene, family hygiene, and personal hygiene, toilet and bath-room facilities play a very important role. In several slums due to lack of latrine facilities slum people defecate in open air and majority children do so. In areas very close to slums, people living in neighborhood having felt the heat of environmental

pollution due to open defecation government and non-governmental organizations have been extending benefits of toilet facilities to slums. This is evident from the table-6 that 83.2% of sample reported to have toilet facilities. A total of 58.4% of them have individual toilets and out of the remaining, 24% of them use public toilets besides 2.4% of shared latrine users and 15.2 % are open defecators. The central government has given acceptance for the construction of 1000 toilets in the slums of Karnataka under “Nirmala BharathAbhiyana”. Out of 1000,500 are planned within Bangalore slums. Under Vambe and NirmalaJyothi Projects, 33,000 houses are to be constructed for the slum dwellers.

**F. Drinking Water Availability**

Table 8 - Drinking water availability

Sl. No	Name of the slum	Within the house	Percentage	Outside the house	Percentage
1	B. Nagar	9	18	41	82
2	R. Nagar	1	2	49	98
3	P. Palya	0	0	50	100
4	A. Nagar	0	0	50	100
5	C. Nagar	0	0	50	100
All slums		10	4	240	96



Another variable which could reflect the health condition of people is safe drinking water. It is reported that 90% of the sample draw water from community taps. It is only in case of Bapuji Nagar slum as already noted earlier as developed slum, 18% reported to possess individual home based taps. This clearly indicates that there is still lack of basic amenities in slums. Lack of individual taps is due to the non-availability of sufficient safe drinking water. Given the depletion of underground water, irregular rains, the picture is becoming increasingly precarious.

**Findings**

The findings of the study are summarized as follows:

1. The basic characteristics of the slums essentially remain the same
2. The urban environment has been proliferated due to the unhygienic conditions of the slums
3. Pollution due to unscientific handling and disposal of Bio-medical waste and it is also found that the improper waste disposal not only causes impact on the surrounding environment but also on the health conditions of the people.
4. Rapid depletion of resources due to rapid growth of population in general and urban population in particular



## **Conclusion**

One of the inevitable and almost unavoidable social consequences of urbanization and industrialization has been the unabated proliferation of slums accompanied by environmental pollution among much else. Slums created in this way have come to pose many serious problems to urban communities in general and women in particular. Present study reveals the fact that the living environment along with work environment leads to severe health problems. A number of diseases have been associated with inhalation exposure to polluted environment like, respiratory disorders whose effects range from minor symptoms such as coughs and dyspnea to severe ones such as acute respiratory infections (ARI), asthma, and pneumonia, chronic obstructive lung diseases such as bronchitis, cardiovascular disease, tuberculosis, lung cancer, and blindness. In addition, pre-natal effects such as stillbirths and low birth weights are also associated with pollution.