

Chapter V

SUMMARY AND CONCLUSION

Sanitation is required for all human beings. To avoid diseases, air or water borne, man should take care to maintain his personal and oral hygiene and also should take care of the surroundings around him making sure that they are clean. Health status is a key indicator of human well being .Good sanitation together with good hygiene and adequate safe water facilities are fundamental to health. The health of people not only depends on the number of doctors and hospitals, but also on a clean and safe environment. The approach to health through the conditions in which people live and work is popularly known as social determinants of health (SDH).The intermediate block of SDH included by WHO are living and working conditions, social and political exclusion, social capital, access to quality health care, violence and crime, transportation and the physical environment. Environmental sanitation is a major public health issue in India. Interventional studies on environmental sanitation in India highlighted the importance of prioritizing control strategies. Environmental sanitation envisages promotion of health of the community by providing clean environment and breaking the cycle of diseases.

Poor sanitation affects everyone, but especially the poor and vulnerable (children, Women, the disabled, and the elderly). The situation with reference to Women's health in the urban slums is worst as their health is neglected the most. An overview of Women's health status reflects a sobering picture. Insecurity relating to regular income, food, shelter, access to health care and other essential services along with poverty and difficult physical and social environment has an adverse impact on the health of urban poor women. (Das and Shah, 2001) . Sanitation' means different things to different people, but its definition has to include 'the safe management of human excreta', usually by means of a toilet that confines faeces until they are composted and safe, or enables them to be flushed away into a sewer. In its fullest sense, sanitation also includes environmental

cleanliness, hand washing, garbage removal and waste water disposal. Growing slum population and lack of adequate sanitation force over 50 million men, women and children to defecate in the open every day. The poor bear the worst consequences of inadequate sanitation in the form of ailing children, uneducated girls and unproductive people, making these populations even more vulnerable and costing India 6.4 percent of its GDP in 2006. (www.dasra.org). Lack of sanitation leads to various diseases and the health effects are reflected in the social as well as economic aspects of an individual.

There is a mass scale migration of the rural poor to the urban areas and they ultimately choose any slums for settling down where, virtually they have no access to basic amenities like safe drinking water and toilets and which are the breeding grounds for diseases that endanger the health of its residents. In the absence of an adequate health care system, the urban poor of India, particularly the Women, continue to suffer and remain in the vice like grip of poverty, powerlessness and disease. The special needs of this growing mass of population can, therefore, no longer be ignored since almost one third of the country's population resides in the slums of various cities. The study finds that there exist a cause-effect relation between the poor sanitation and the health of the women in urban slums. Women bear the burden of bringing up of children and also additional day to day responsibilities like fetching water, cooking, cleaning and many more. With this view, researcher has attempted to project the poor health status of women in the urban slums, in Coimbatore, who are the worst bearers of the consequences of poor sanitation.

OBJECTIVES:

- To examine the Socio-Economic conditions of selected slum women.
- To analyze the existing sanitation condition and its influence on the health of the slum women.
- To study the various problems faced by the slum women in following hygiene practices

- To assess the awareness level regarding good sanitation and hygiene and determine the willingness to pay for better sanitation facilities.
- To study the implementation of sanitation and hygiene programmes initiated by the government and to suggest remedial measures to improve the sanitation and the health status of the selected sample.

HYPOTHESES:

- **H₀** : The health status is independent of the socio economic conditions.
H_a : The health status is dependent on the socio economic conditions.
- **H₀** : There is no correlation between Sanitation factors and the health status.
H_a : There is correlation between sanitation factors and the health status
- **H₀** : There is no significant improvement in the hygiene and sanitation practices after the educational intervention.
- **H_a** : There is significant improvement in the hygiene and sanitation practices after the educational intervention

Many studies have thought out the health and environmental variables and the correlation between the two variables. (Nandy.et.al(1947), Gulis .et.al (2004), Owoeye and Adedeji, (2013), Sufaira (2011), Venuthurupalli (2014), Sundari (2003), highlighting the impact of environment on health. Goswami (2015) and Alam et.al (2013), have studied the slum situation and the living and health condition of women living in urban slums. A sizable number of research articles (e.g., Gupta and Mitra, (2002), Kumar and Aggarwal (2003); Sengupta (2010) Kit et al., (2012), Bhavsar et al.,(2012); have addressed the problem of urban slums by considering several case studies and also evaluated government programs and policies taken for making India slum free. Poor environmental condition existing in slums have been focused by various studies (Sundari, 2003), Kotwal.et.al (2008), Akter (2010). Many studies have pin pointed the poor health status of the slum dwellers, (Pryer et al 2002, Gulis et al 2004, Pande (2018),

Sheuya et al (2014). Mensch et al(2004) and some studies deal with their livelihood interventions. The present study attempts to measure the sanitation condition in slums by constructing "Sanitation Index", and there by analyzing the sanitation condition in slums. Also, the impact of various sanitation variables on health is studied by the investigator.

Methodology

Coimbatore Corporation is divided into five zones. Each zone has 20 wards. Details of the slums in Coimbatore (both notified and non-notified) have been collected from the Coimbatore Corporation through Tamil Nadu Slum Clearance Board. The slum population of constitutes nearly 16 percent of the total population of the Corporation. Emergence of IT, Educational institution ,Industrial growth, and augmentation of medium and small scale industries provoke many to the city. Estimated statistics from the socio economic survey of Slum Clearance Board shows that there are 29937 slum households in Coimbatore Corporation of 3.42 sq.km area. The investigator selected the slum which had the highest population from each zone. Teenability analysis done by the slum clearance board indicates the slums that falls in the status of fitness of land for human habitation. The slum with highest population in each zone is drawn and from among them 30 percent of the households were selected. The data pertaining to the study was exclusively collected from the women folks only.A total of 768 Women households were contacted. The complete information were collected from 723 households only,as 45 of them were not interested in giving data. The required data was collected during the period February 2015-May 2015.

Techniques of Analysis

Besides averages, percentages and graphs, techniques like Multinomial logistic regression, Garret ranking scale, Likert's summated scale, Cronbach's alpha, Factor analysis, sanitation index, estimated Logit Model, Paired 'T' test were used.

Empirical Findings of the Study:

The major findings of the study are summarized below:

Socio-Economic Profile of the Respondents

- Majority of the residents are Hindus (44.1 percent) living in joint family (74.4 percent). 26.8 percent have completed primary education ,19.8 percent have completed middle school,6.5percent have done their secondary education .
- Around 20 percent of women have attended higher secondary level and only 7.9 percent of women are fortunate to complete a degree. The rate of unemployment among the urban poor communities is low due to the high rate of female participation in the urban workforce .
- Among the selected sample, 27.4 are working as domestic servants and 25.2 percent are self employed. Most of the corporation workers are residing this area, (11.7 percent) and 3 percent of the population are vendors and 7.6 percent are shop-keepers and only 25 percent of the respondents do not have a proper job or business and are unemployed.

Sanitation Scenario

- Separate Toilet facility is available only to 23.9 percent of the surveyed population,51.7 percent reported that they use common toilet .Open defecation is reported by 24.3 percent.
- No proper structure(13 percent),Not clean(19.3 percent),Insufficient water (23.3 percent),Malfunctioning(9.7 percent),Personal preferences,(7.4 percent),not able to afford charges(21.6 percent) are the various reasons stated by the respondents for not using common toilets.
- Disposal of waste in dustbins is reported only by around 22 percent of the respondents.
- High prevalence of Mosquitoes and other flies reported by majority of the respondents.(around 63 percent)

- The investigator observed that the drainage is opened and clogged in many places and reported by nearly 60 percent of the respondents.
- There existed foul smell and waste sattered all over the roads in many areas as observed by the investigator.

Sickness related to poor sanitation

- Viral Fever is the most prevalent sickness observed(20 percent)
- Diarrhoea (around 16 percent)
- Diabetics(life style disease)-(around 16 percent)
- Chiken pox(6 Percent)
- Asthma(5 percent)
- Frequent cold and head ache(4 percent)

Loss of income due to sickness

- The cost of poor sanitation is yet another burden for the people who already undergo various struggles for living under unhygienic conditions in slum
- The average cost associated with poor sanitation, constitutes a much greater proportion of a poor person's income than that of a wealthier person.

Cost of poor sanitation

- The medical expenses is a big burden for all ,specially for the poor. Spiralling cost of medicine coupled with the high consultation and treatment charges ,push the poor into debt burden. Many households became poor due to the financial burden of health expenditure .In the study the yearly expenditure of the households were considered.

- Nearly 52 percent of households members spent below ₹ 5000 for their treatment; 33 percent of them had their medical expenses between ₹ 5000-10000 and only 14 percent above 10000 for their surgical and diagnostic towards their treatment.

Sanitation and Cultural Factors

- Sometimes ,people in the slums get sick and start to develop symptoms that later on turn out to be a mortal disease, but the reasons why they do not go to and seek help is because ,it is considered luxury to them. Toilet is being considered as a luxury by some group that prevents them from constructing own individual toilets at home.
- Open defecation among children is a common phenomena observed in slums, which increases the gravity of the problem. The children are subjected to defecate in front of the houses or near the drainage and some times ,their stools are left as it is which leads to the easy spread of diseases and also serves as unhealthy condition of the roads.
- Therefore the health status is dependent of socio economic factors and the alternate hypothesis is accepted.
- All the socio economic factors except age are highly significant in determining the health status of the households and hence the null hypothesis is rejected at 5 percent level
- Hence there is a need for improvements in the multidimensional factors of the urban slum dwellers. Improvement in their socio economic condition like education, income ,etc are important to create awareness on healthy living .Sanitation condition also should be equally improved and the slum dwellers should have access to clean and good sanitation facilities to protect themselves from various diseases which pose threat for their existence
- Majority (50.6 percent) cover the drinking water.

- Hand washing before cooking and eating ranked 2nd(48.4 percent)
- Washing the cooking and feeding utensils(47.3 percent)
- Toilet disposal system and cleaning ranks the least 10th rank.
- Garbage disposal in bins rank 9th
- Lack of proper sanitation facilities, Lack of access to adequate drinking water, inadequate provision for social infrastructure, Unhygienic environment, Non-availability of basic facilities in slums explained nearly 27 percent of the variance.
- Low awareness of services and programme, inadequate provision for social infrastructure, Lack of information and financial resources, Overcrowding increases the health risk explain nearly 13 percent of the variance
- Lack of garbage disposal, inadequate nutritional intake and non-availability of subsidized ration properly explains 10 percent of the variance.
- Solid waste management and lack of proper social safety net explains nearly 8 percent of the variance.
- Lack of job security and no proper sewage services which explains nearly 6 percent of the variance.
- Majority lie in average index(48.13 percent) of Sanitation index.
- 46.75 percent of the area falls under poor index.
- Only 4.99 percent shows fair index
- Very few (0.13 percent) shows a good index.
- Age had an impact on willingness to pay for sanitation because the young age groups were aware about the issues of sanitation.
- The coefficient of education and occupation emerge as an important factor and are found to be statistically significant

- Income variable had a positive influence over willingness to pay for maintenance of sanitation
- The household size was found to be a negative variable and it will decrease the probability of willingness to pay for sanitation.

Various Government programmes for the welfare of slum dwellers are:

- Valmiki Ambedkar Awas Yojana (VAMBAY)
- Jawaharlal Nehru National Urban Renewal Mission (JNNURM)
- Swarna Jayanti Shahari Rozgar Yojana (SJSRY)
- Integrated Low Cost Sanitation (ILCS)
- Affordable Housing in Partnership (AHP)
- Rajiv Awas Yojana
- Swarna Jayanti Shahari Rozgar Yojana (SJSRY)
- Rajiv Awas Yojana' (RAY)
- Interest Subsidy Scheme for Housing the Urban Poor (ISHUP)
- Based on the surveyed sample, it was evident that least number of women were aware of the government programmes implemented towards sanitation .Out of 723 women, only 169 women had awareness about the some programmes.
- Only 34 percent are the beneficiaries and nearly 66 percent of the women who are aware of government programmes are not benefited of any of the schemes by the government.

The effects of Educational Intervention:

- The intervention programme resulted in the change in the attitude of women towards following hygiene and sanitation.
- There is large change in their attitude toward clean and hygiene.
- Therefore it could be pointed out that the educational interventions done is effective and there is remarkable improvement in the hygiene and sanitation practices.

CONCLUSION

- The study shows a significant correlation between socio economic status and the health of the respondents.
- There is also a significant correlation between sanitation condition and the health of the respondents
- The sanitation and hygiene practices can be improved through proper education and intervention programmes
- The sanitation index serves as a measure of existing sanitation condition and hence development measures can be taken based on the sanitation index.
- It is the important role of the government to take appropriate steps to improve the living condition of the slum dwellers as well their health and sanitation.
- The attitude of the people in slums also should be toward maintaining better hygiene and sanitation.

RECOMMENDATIONS

Based on the analyses, the following recommendations are suggested:

- Due to space constraints, most of the slum dwellers are not giving importance for the toilet in the slums of Coimbatore which leads to unhygienic environment. Women and girls feel shame and loss of personal dignity and safety risk if there is no toilet at home. They have to wait for the night to relieve themselves to avoid being seen by others.
- As stated by some of the respondents, they prefer to defecate in bushes or unused lands nearby their dwellings rather than endure the smell and flies in and around the non-hygienic toilets. More over they are of the opinion that the number of toilets available is currently inadequate and are over – used and ill-maintained. With the recognition of sanitation as a basic

human right³ there is a growing awareness that the impacts of inadequate sanitation reach far beyond the realm of diarrhoeal disease

- The distance and time taken to reach the toilet is also yet another factor deciding its usage. Longer the distance, lesser is the preference for using the common toilet. Women and children faces security problem while reaching the toilet as well as it is a very difficult task for the old people. At night, women feel so insecure for reaching common toilet when it is of longer distance and they prefer open defecation in the bushes or some places near their residence.
- The menstrual hygiene is a very big issue for slum women as they have to often visit the toilet to change their napkins and dispose the used ones. When the women in the study area are interacted, majority of the women possessed knowledge on using hygienic sanitary napkins and its safe disposal . The respondents felt the burden of not maintaining their privacy in common toilets, and so they suggested provision of sanitary napkins inside the common toilets which will be helpful to maintain their privacy.
- More over they suggested that government can provide sanitary napkins at subsidised rates to reduce their burden and few people are of the view that their school going children suffer more of menstrual problems as they have to be accompanied by their mother or any other elderly women at home to reach the common toilet.
- The struggle for drinking water during summer is severe in urban slums. Apart from ,losing their productive earning time, children miss their school days ,as mostly women and girl children are engaged in fetching water for their family. This prevents them from working in their regular field
- Steep barriers to accessing quality health services and emergency services, primarily for slum dwellers, make it difficult for poor urban residents to prevent and treat these devastating health problems. Even

though urban health services comprises of various types of providers such as public hospitals and clinics, private physicians and nurses in private hospitals and clinics, as well as non-profit or faith-based nongovernmental organization clinics, user fees, which are frequently charged by public and private health providers, are often unaffordable to slum dwellers.

- As the Socio economic conditions as well sanitation conditions influence the health of the people, government has to take measures to improve their socio economic status and provide them good sanitation facilities and there by improve their health status.

Recommendations for Future Research

- In the present study, the sample used was limited to five zones in Coimbatore. Hence generalization had been done with caution. Future studies incorporating more samples from Coimbatore district, state and country are hereby suggested.
- The present study is done on the sanitation in urban slums, comparative studies can be done on rural and urban slums which will be enriching the future studies.
- More researches can be done on the success of government programmes to enhance the living condition of the slum dwellers.
- Exclusive Studies on relocated slums during the expansion of roads, construction of bridges and their living condition after relocation can be done.