RESEARCH BRIEF

Improving Health of Children in Urban Slums Through an Integrated Model Based Approach – A Case Study from Chennai.

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An integrated model based approach was used to improve health status of children in an urban slum. An urban slum was selected based on fixed criteria and health needs were assessed. The environmental conditions were improved. Health care needs were taken care of and self-help groups were started to make them financially independent. This model was evaluated in 204 families with 350 under-five children. Survey revealed that 88% of them used safe garbage disposal and 95% of them had household latrines. Only 24% of under-five children had water borne morbidity in past one year and there were no vector borne diseases. 71% of the eligible couples followed some contraception. Mean duration of exclusive breast feeding was 7 months and average total duration of breast feeding was 15 months. Integrated model based approach based on principles of primary health care works in urban slum with effective community participation.

Key words: *Child health, Community participation, Integrated approach, Urban slums.*

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Rural-urban migration has led to growth in urban slums that in 1998, India's urban poor outnumbered the rural [1]. Due to problems with water, housing, sanitation, and physical space—the residents of urban slums, especially children, are affected disproportionately by ill health [2]. A study at Mumbai noted a significant correlation between morbidity due to common infections and sanitary conditions in urban areas [3]. Hence, health needs a holistic approach rather than a disease-based approach. Holistic approach involves inputs from various domains and hence need an integrated and model based approach. This is one such attempt to improve the health status of children in an urban slum by an integrated model based approach and evaluate the functioning of this model.

METHODS

About 40 slums of 3000 population were screened for government-approved area and Sathya Nagar was selected. Major issues identified in the community were: (*a*) lack of potable water supply; (*b*) no proper sanitation and garbage disposal, household toilets as well as public toilets; (*c*) mosquitoes and rodents menace; (*d*) lack of health facilities at the near vicinity; and (5) lack of financial support for women.

Partner organisations arranged the finances and the health aspects were taken care by our organisation. In addition, the trust also gave inputs for the better environment and community development. There were periodic meetings to review the progress and discuss the future plans. The area had 10 streets and for each street a selected female volunteer acted as a link worker for delivering the services and getting messages/feedback. The following interventions were done:

Environment: This involved development of a proper garbage collecting system, sanitary latrines and rainwater harvesting system. With the help of the government officials and people's motivation, every household got potable water supply. Garbage was segregated at the source according to its degradability and then removed from the area by vehicles. Drainage system and household toilets were built with contributions from the people.

Healthcare: Health clinics were conducted thrice every week initially and subsequently decreased to two per week and one per week. Every week children with malnutrition were followed up, treated for infections and mothers were given nutritional counseling. Adolescent girls were also counseled periodically about growth and development, menstrual hygiene and mental well-being. Periodic

counseling sessions and health days were celebrated. Apart from this, Hepatitis B and Rubella immunization camps were conducted.

Financial upliftment of women: The two main activities were motivating self help groups and prevent debts in the families. There were more than 10 self-help groups and 20 of them have learnt tailoring for a year and are doing it as an income generating activity.

RESULTS

A survey was conducted after a period of 3 years. Information was collected from 204 families (with 165 under five children) with a semi-structured questionnaire in September 2006 and key indicators were generated. 95% of them used a household latrine and 88% of them used corporation waste disposal methods. Water born morbidity was 24% (at least one episode of diarrhea in a year) and no vectorborne diseases. The mean duration of exclusive breastfeeding was 7 months and the comple-mentary food was started in 8 months. The children were breastfed on an average for 15 months. 71% of the couples were protected from unwanted pregnancies by a method of contraception. There were no maternal and under-five deaths in this slum in the implementation period.

DISCUSSION

The Millennium Development Goal of reducing two thirds of child mortality is possible only if we apply a holistic approach rather than a disease-focused approach. This approach integrated three components namely environment, microeconomics and health. 62% of deaths and 74% of DALY's in children are attributed to poor sanitation and water supply [4]. Hence provision of safe water and sanitation universally has been one of the goals in millennium development. This model provided these components to this urban slum.

Need based approach, partnership building, and participation of community are important in bringing up children of slums [5]. The community participation was active in this slum and was the key factor for the success of the model. Involving all classes of people (equitable distribution), using micro-credit system for financial upliftment (appropriate technology) and co-ordination of several departments (intersectoral collaboration) were the other favorable factors for the functioning of this model. It is lucid that the principles of primary health care can be easily adopted for improvement of health. The improvement of environment is evident by household toilets and proper disposal of wastes. This has been facilitated by periodic community meetings and participation.

The presence of female volunteers in every street in the community enhanced the process of health care improvement. The link workers role in improving health care of communities has been established worldwide [6]. The outputs of exclusive breast-feeding for a mean duration of 7 months and total breast-feeding for mean duration of 15 months are reassuring. The working of this model is also evidenced by the decrease in prevalence of waterborne diseases and absence of vector borne diseases.

Sustainability of the model has been ensured by community participation and ownership. Since people from the community played a vital role in their empowerment, they can sustain this model. Moreover financial sustainability has been ensured using micro credit systems for women. It is possible to replicate this model in other settings provided the community participates and takes ownership, and the model is need based and based on principles of primary health care.

Integrated model based approach works better in slums provided it takes in account the needs of the community and the principles of primary health care.

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