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Local Planning and Democratic Participation as Mechanisms for Improving Third World Health Conditions: Recent Experiments in Kerala, India

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Kerala Health and Decentralization Project
Case Study: The Erattupettah "Healthy Village" Project

Background and Location

Situated 42 kms northeast from the Central Kerala city of Kottayam, Erattupettah Grama Panchayat is a mixture of rural and urban characteristics. This village has an area of 7.5 sq. kms and a population of 25,357 (1991 census) of whom 78% are Muslims. Erattupettah is one of the most densely populated panchayats in India. The density of population in Erattupettah is 3,381 per sq km. Though the rate of employment participation among men between 20 years and 60 years of age is 83.7% (mostly trade-related), the corresponding figure for women was only 4.09%. After the formation of 92 self-help groups through the people's campaign the employment participation of women increased to 13.48% in 2000.

Erattupettah is an important trading center for hill products such as rubber, coffee, pepper, and cocoa. The trade attracts a transient population of about 15,000 persons while another 2,000 agricultural labourers come in from the neighboring state of Tamil Nadu. The large transient population adding 67% to the regular panchayat population complicates public health planning and health

care delivery. The farm workers crowd into rented rooms or sometimes put up tents or even sleep in the open air along the roadways.

The Panchayat Development Report (PDR) prepared at the beginning of People's Campaign in November-December 1996 – based on the concerns raised in the grama sabhas, and from the secondary data activists collected – gives a picture of the difficult conditions that prevailed in the health sector at the time.

Sanitation Problems

The PDR noted that 827 houses or 20% of the 4,175 total houses or did not have latrines. In Erattupettah panchayat these 827 families had to attend to their primary needs on the banks of the river and the canal or in other open areas. There was not a single public toilet in Erattupettah. The transient population of over 2,000 therefore attended to their primary needs in open-air settings, as did an additional 15,000 people who visit the panchayat daily. The Development report pointed out that a consequence of all this was acute water pollution where the Theekkoyi River and the Poonjar River merge to form the Meenachil River. Sewage from the hotels (restaurants and tea shops) was deposited in the Meenachil River. At the same time there were no facilities to safely dispose of the more than 2 tonnes of solid garbage generated every day in the trading center of Erattupettah. The piling up of fish, meat, and other refuse on the riverbanks was often reported in the local newspapers.

Drinking Water Problems

According to the information collected at the grama sabhas (village assemblies) and from the secondary data, only 658 houses or 16% had their own wells. Only 60 of the 136 public taps in the two public water supply systems were in working order in 1996. 1,200 families were depending on these taps for drinking water. Eight public tube wells and four other wells were in existence in 1996. It was estimated at the time that about 2,000 families experienced drinking water scarcity. The PDR noted that 444 families did not have habitable houses, which invariably affects the health of the people.

Problems with the Primary Health Center

In addition to the Primary Health Center (PHC), which had been transferred to the grama panchayat in 1995, seven small private clinics were present. The number of visits to the PHC, for treatment in 1995-96 was 21,400, about 68 visits per day (PHCs are not open on Sundays). The report described the dilapidated condition of the Primary Health Centre. There was not enough furniture, no paper to write prescriptions, not enough medicine, not even the small paper containers for giving medicine to the patients. Outpatient Ticket supplies were exhausted so that the physicians could not keep or retrieve adequate records of returning patients. The electric wiring was out of order. Some doors and flooring were not

in good condition. There was no ECG, no overhead projector for visual displays during health classes, and no vehicle. On the PHC's 2 acres of land no improvements had been made for some time.

Why the People's Campaign Became Important

Many people in Erattupettah had been trying to identify and solve the basic health problems in the area for a long time. Drinking water, sanitation, housing and the primary health center had been under consideration for development action. Immediately after the newly elected local bodies came to power in September 1995 but before the People's Plan Campaign was launched, people in Erattupettah decided to seek solutions to the scarcity of drinking water and the disposal of solid waste. In 1995-96 two water supply projects were proposed. Since the local village councils at that point had no finances devolved to carry out these activities, they organised the beneficiaries into piped water supply societies. Each house connection cost the beneficiary Rs 2,000-3,000, equal to about 17 to 25 days' wages for a labourer. The projects solved the drinking water problem in a few areas but activists soon realized that with only the panchayat's internal resources and the beneficiary contributions of mostly poor people it would not be possible to solve the drinking water and sanitation problems of the whole community.

When the People's Campaign for the Ninth Plan was inaugurated in August of 1996, Erattupettah activists and planners realized they could capture the resources to implement a comprehensive health program. Thus, came the idea of the "Healthy Village." The idea of a "Healthy Village" project was developed by the Panchayat president Mr.P. K. Aliyar, the KRP (Key Resource Person) of the people's plan, Mr. Shaji George, Dr. Jayakumar of the PHC, the Village extension officer, Mr.Gopalakrishnan, the Panchayat convenor (secretary) of the people's plan, Mr. Mohammed, and the joint convenor Mr. N. P.Yunus. The panchayat committee gave its consent to this idea and it was introduced to the grama sabhas where the project was discussed and approved. They would try to address all the major determinants of health: drinking water, sanitation and solid waste disposal, health education and enhancement of curative care services.

Organizing the Project: A Comprehensive Village Health Survey

To start the project activists organized a 21-member healthy village committee with panchayat president Mr. P. K. Aliyar as its chair and Dr P.R.Jayakumar (medical officer of the PHC) as the project health officer. The committee set up training for female volunteers selected from self-help groups. The volunteers were selected and the healthy village project was started at the end of 1998 to conduct a basic social economic health survey. In two weeks of March 1999 they completed the survey of all houses in the panchayat. They collected information on

(a) Numbers and educational levels of household members
(b) How many employed and what they earned
(c) The nature of care that children and mothers are receiving, including prenatal and postnatal care.
(d) Birth weight of children born recently
(e) A preventive injections record for each child
(f) Methods of solid waste and wastewater disposal, whether mosquitoes are a problem for the household, and any other environmental factors that might contribute to disease
(g) (Type of house, whether it has an electrical connection, and the type of fuel used. Wood fires without chimneys spread suspended particulates that may cause respiratory diseases.)
(h) Availability of health care
(i) Health awareness of household members
(j) Monthly expenses for health care
(k) Availability and type of latrine for each household
(l) Availability of safe drinking water

In 16 sample households they conducted a test for water purity using a hyrdrogen sulphide kit supplied by the health department.

The survey resulted in some important findings:

- 14.53% of recently born babies had birth weights of less than 2,500 grams Babies below the birth weight of 2,500 grams are medically considered 'not healthy.'
- 16.49% people ordinarily throw their kitchen and household waste outside nearby
- The birth rate in the panchayat is 21 per 1000, which was above the Kerala average of 15 in that year.
- Out of the 16 water samples tested only 2 were found to be free of contamination while 14 showed the presence of Collins bacteria which causes stomach diseases.
- The survey revealed that of children under 6 years of age, 10.24% lacked BCG vaccination, 15,8% lacked OPV, 27.12% lacked DTP, and 29.5% lacked measles innoculation. These non-vaccination rates are much higher than the all-Kerala averages. The high rates of non-vaccinated children strongly along with some other evidence from the survey, suggested a low level of health awareness among many parents in Erattupettah.

Implementation

On the basis of the survey findings, the following programs were started in 1999–2000:

School health programme: Under this programme 6,000 students in 9 schools were given health checkups and were issued health cards containing information of use to medical providers in the future. The program utilized the services of doctors and other staff of the Erattupettah PHC and some nearby PHCs. School health and sanitation clubs were formed in all 9 schools under the direction of 2 teachers from each school. A one-day training was given to these 18 teachers. The doctor of the Erattupettah PHC and doctors of nearby PHCs trained the teachers. They were given training about the basic aspects of health care and hygiene. They were also given training for the identification of students having learning disabilities.

Health cards for all: 60 women volunteers from the women's self help groups were given 2 days training for visiting the houses and preparing family health cards for all household members. Family health cards were distributed to all 4175 families. Awareness classes for the public were held in all 10 wards before the distribution of the health cards. From 200 to 250 people attended each class. The classes provided information on health care and hygiene, diseases commonly found in the area, and prevention of the spread of communicable diseases. The instructors also discussed how to utilise the facilities of PHC and the other services available from health workers. Volunteers collected the information from every family and filled in the health cards. A copy of each health card was provided to the primary health centre. On the basis of the information collected for the family health cards health camps were held in different wards of the panchayat. For managing these health camps, a 9-member panel of doctors was constituted with the doctors from the Erattupettah PHC, nearby PHCs, and doctors from the Taluk (subdistrict) hospital.

Healthy hotel project: Most of the 44 restaurants and teashops (hotels) in Erattupettah were causing water pollution. Over a two-month period in the year 2000, health workers from the PHCs examined all the hotels and set up a sanitation certificate system. Many hotels had been diverting their wastewater into the Meenachil River. Construction of soakage pits was made compulsory and the hotels built them in back of the restaurant areas. Wastewater is diverted to the pits using big tubes. The size of the soakage pit depends on the size and business of the hotel. Normally a pit of 1-meter length, 1-meter width and 1-meter depth is dug. The pit is filled with big pieces of broken brick in the bottom part of the pit and small pieces on the top. Then the pit is covered with concrete slabs. When the wastewater is diverted to this soakage pit the brick pieces absorb it and thus prevent polluting of ground water and river. These broken brick pieces should be replaced with new ones in due course for effective working of the soakage pits. Only the licences of the 36 hotels that constructed the soakage pits were renewed and sanitation certificates were given The Grama Panchayat made a sanitary certificate issued by the health authorities a prerequisite for renewing the hotel license every year and for issuing licenses to new hotels. The other hotels were closed. Now serving boiled water is compulsory in hotels. Health check ups were carried out for all the hotel employees and health cards were issued to the 152

employees in the 36 hotels receiving license renewals. Some of these workers lived outside Erattupettah and were thus not covered by the local health card system. When the employees get cards verifying that they do not carry any communicable diseases the customers can feel safe in taking food from them. "Healthy Hotel" competitions were also conducted to stimulate health awareness and cleanliness among hotel owners. Cash prizes and certificates were awarded to selected hotels.

Safe drinking water. The development report had emphasized the shortage of drinking water as one of the most serious public health problems in Erattupettah. Activists realized that by combining the plan funds received through the devolution from the People's Campaign with the panchayat's own resources, they would have enough resources to provide safe water in five years. They prioritised the projects. In 1997-98, two drinking water projects were drawn up and implemented. Over the following three years, further small local projects for the supply of drinking water were drawn up. Within four years they had brought safe drinking water to 1,750 families that had previously lacked access to it. This was 88% of the families in need of safe drinking water access. In addition, 150 new houses (34%) were constructed for the 444 families that had lacked homes. These activities left 294 families without adequate homes and 250 who had houses but lacked immediate access to safe drinking water.

Household sanitation. Household sanitation is mainly a problem of installing proper latrines. Public sanitation includes latrines in public places, and provision for solid waste and wastewater disposal. For the 827 households without latrines, planner's mobilized resources from the state plan assistance and the local funds along with funds from central government programs. Households were provided with the construction materials needed for the construction of toilets while the household members provided the physical labor that was the beneficiary contribution. In four years, 658 households, about 80% of those previously lacking them, managed to construct safe latrines.

Public sanitation. As discussed earlier, Erattupettah has a floating population of labourers and traders. Because there were no public toilets or bathrooms the possibility of drinking water getting contaminated was always present. Through the People's plan the panchayat constructed two public bath and toilet complexes, one at the private bus station and the other near Muttam Junction on the banks of the Meenachil River. At the bus stand there are three latrines; the Muttam complex has four latrines, three urinals, and three bathing rooms. Contracted private employees run both complexes. Individuals pay 50 paisa (Rs 0.5) for using urinal and Rs 2 for using the latrine. It is a commonly expected amount. The funds are used for providing water, for cleaning and for maintenance and management for using these facilities.

For collecting solid waste Erattupettah placed 85 dustbins at different locations. The panchayat bought 55cents (0.55 acres) of land in a remote area in

ward 1 and converted it into a dumping station by constructing a compound wall around the land. A tractor was bought for transporting the solid waste to the dumping station. The tractor collects the waste daily from the dustbins and from various points of the panchayat area and disposes of it in the dumping ground.

Improving the Primary Health Center. By a government order on 23 December 1995 the Kerala government had transferred the PHCs to the local communities. Erattupettah panchayat fixed the door, flooring, and electric wiring of the PHC. They purchased an ECG, an overhead projector (OHP), and new furniture. A panchayat jeep was provided for the transportation of medicine from the district headquarters 42 kms away. More regular medical supplies for the PHC were arranged through constant contact of the Panchayat President with the District medical officer (DMO). The co-ordination between the panchayat and the hospital staff improved. The co-operation of doctors, hospital staff and panchayat authorities very much helped in improving the conditions of the PHC. As the project health officer of the "Healthy village project", the doctor of the PHC could mobilise the active participation of hospital staff in this venture. Before the People's plan there was no coordination between panchayat and PHC.

Outpatient tickets were issued. Outpatient visits increased from 68 per day in 1996 to more than 250 per day by 2000 due to the more regular physician service and greater availability of medicine. The PHC in Erattupettah does not offer in-patient services. Altogether 6 medical camps were held between 1999 and 2001 March. About 450 people participated in each medical camp. Sixty classes were held for voluntary health workers. The voluntary health workers were sisters from IHM (Immaculate Heart of Mary) Hospital, Bharananganam and some volunteers from the self-help groups. The numbers of paid staff are not adequate to take up all the health initiatives in the panchayat such as medical camps and health awareness programmes. The PHC doctor gave them classes about public health care.

Local slaughterhouse. A new slaughterhouse was constructed and licensed. Previously Erattupettah had 10 small slaughterhouses – all small open single rooms thatched with coconut leaves or tin sheet roofs. These slaughterhouses were also functioning as meat shops. So slaughtering was done in the open ground near these shops. The environment was highly unhygienic. The newly constructed slaughterhouse has concrete flooring and proper drainage facilities. Animal killing and processing is done hygienically here.

Cost

Table 1 shows that Erattupettah invested 43.48% of its total plan funds from the People's Campaign into the healthy village project. The panchayat also put substantial local investment in to match the plan funds, successfully achieving one of the original goals of the campaign to mobilize local resources. The Rs 2,360,621 mobilized locally amounted to 35.90% of the total expenditures, above

the 25% campaign activists had set as their goal and the 25% that actually was raised during the first year of the campaign (Thomas Isaac and Franke 2002:115).

Table 1. Expenses (in rupees) for Health and Sanitation
Erattupettah Grama Panchayat: 1997-2000

	1	2	3	4	5
Sector	Plan funds	Own funds	Total	Own funds as % of total	Percent of the total plan fund allotted to the panchayat
Drinking water	1,390,358	213,090	1,603,448	13.29	14.35
Sanitation	599,100	1,011,400	1,610,500	62.8	6.18
Solid waste disposal	505,107	1,055,393	1,560,500	67.63	5.21
Healthy village project	233,785	31,629	265,414	11.92	2.41
Renovation	85,000	49,109	134,109	36.62	0.88
Slaughterhouse	1,400,000	0	1,400,000	0	14.45
Totals	4,213,350	2,360,621	6,573,971	35.90	43.48

Monitoring and Evaluation

A five member monitoring committee was formed to monitor the implementation of the projects. Money was allotted on the basis of the recommendations of this committee. This committee rated this as a very effective and useful project.

Follow up and Future Needs

Due to unauthorised sand collection from the river natural filtration is not possible. At present there is no water storage; only chlorination. A water purification plant and storage facility is needed in Erattupettah.

Spread to Other Localities

The Erattupettah healthy village project was not picked up in its entirety by other communities, but it has come to play an important role in formulating the design for the Mararikulam Experiment underway in Kerala in 2002.

Results

A follow-up health survey has not been conducted, and the water has not been re-tested since the project was begun. But people feel that health conditions are better health situation. Erattupettah remained free from outbreaks of cholera, acute diarrhoeal diseases, leptospirosis (rat fever), and infectious hepatitis, all of which have hit neighbouring villages in Kottayam district in 2001 and 2002. While not as conclusive as an overall health resurvey, the resistance against

diseases that were hitting nearby communities suggests that the Healthy Village approach did improve the health of the village.

Lessons from Erattupettah

The People's plan campaign created an atmosphere conducive for bringing technical experts, people's representatives and the general public together to work with greater cooperation and understanding. The success of the "Healthy Village" Project in Erattupettah is an example of what a collective movement with active participation of the people can achieve. Another important lesson from this project is that active community participation can lead to a strengthening of the links between the local government and the health service professionals.