

PA-ARF-939

**PERCEPTIONS OF CHILDHOOD DISEASES
AND ATTITUDES TOWARDS
IMMUNIZATION AMONG SLUM DWELLERS**

Dhaka, Bangladesh

June 1989

**Resources for
Child Health
Project**

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DHAKA, BANGLADESH

June 1989

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AID Contract No.: DPE-5927-C-50698-00

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REFERENCES

ACRONYMS

BRAC	Bangladesh Rural Advancement Committee
CUS	Center for Urban Studies
DMC	Dhaka Municipal Corporation
EPI	Expanded Programme on Immunization
ICDDR,B	International Centre for Diarrheal Diseases and Research, Bangladesh
NGO	Non-Governmental Organization
REACH	Resources for Child Health Project
TB	Tuberculosis
TBA	Traditional Birth Attendant
TT	Tetanus Toxoid
WIF	Worldview International Foundation

1. INTRODUCTION

1.1 The Aim of the Study

This study deals with perceptions of childhood diseases and attitudes towards immunization among poor women living in the slums of Dhaka. These mothers and their children have been identified as a special target group by the Expanded Programme on Immunization (EPI) working in Bangladesh. It is well known that the crowded and poor hygienic conditions, as well as, the widespread poverty and malnourishment prevailing in the slums render these communities most vulnerable to the spread of contagious diseases.

As only two months were allocated to perform this study, a considerable amount of research was employed from several years of experience in Bangladesh and a number of studies previously done on Bengali health culture and behavior. This was, however, the first fieldwork done in the urban slums. One may ask to what extent moving to the city changes perceptions and behavior in the area of health? How does length of residence in the city, literacy, occupation, income, marital status, neighborhood and experience with health care institutions relate to the acceptance of vaccination? Are the constraints similar in urban and in rural areas? These are some of the questions that this study addresses.

1.2 Immunization in Literature

"Of all the child survival interventions, immunization is the intervention that has been least studied in terms of behavioral factors that influence its acceptance and effectiveness," wrote Barbara Pillsbury (3). "The contrast in the volume of qualitative research on ORT, for example (huge), to that on immunization (meager), is quite astonishing. Likewise, far fewer studies and research projects have been funded, and far less has been written, on behavioral aspects of immunization than on breastfeeding and weaning or even growth monitoring." Immunization has been seen as a "technology-based" intervention requiring little change in cultural models on the part of the recipients. Pillsbury argues that this is a short-sighted view and in order to attract those who find no time or have no motivation to immunize their children, one must look much more closely at cultural values and perceptions to generate interest.

A review of the literature on the socio-cultural aspects of immunization has been compiled by Heggenhougen and Clements (4) as well as Pillsbury (3). In the context of Bangladesh, three small surveys have been recently completed on the subject. These are:

1. "Perceptions of Immunizable Diseases in Rural Bangladesh," BRAC, February, 1988. (5)
2. "Knowledge, Attitude and Practice Regarding EPI in Municipal Areas," A baseline KAP survey conducted in Dhaka and Jessore, January, 1989, VHSS. (6)
3. "Communicating Immunization: a Study Report," Worldview International Foundation, Dhaka, January 1989. (7)

Of these, the BRAC report was found to be the most thorough and the most relevant to the questions raised here. The interviewers appear familiar with the village society where, we are told, they have been residing for six months prior to the study. Unfortunately, responses are not broken down according to the categories of respondents which are said to represent a cross section of different age, sex, religious, educational, professional and economic groups. The immediate objective for BRAC was to evaluate its own program.

The second study carried out by VHSS and commissioned by REACH was meant to deal specifically with "people of low economic status" in cities. This should have been a population similar to that interviewed in the present study but with a literacy rate of 47% (which is above the national average) and an unusually high vaccination coverage, it does seem that the poor have been largely missed out. On the whole, respondents social characteristics are ill-defined and the findings are difficult to interpret and to use as a guide for action.

Finally, WIF investigated attitudes and responses to immunization with a special interest in the evaluation of communication materials. Results are often presented in synopsis form. As with the BRAC study, it contains useful information and provides checking points for a better grasp of the situation in the country as a whole.

All the above studies (including my own) were done in relatively short periods of time and this, of course, limits their scope. But the different points of view presented are not only a question of time constraints. None of the above studies has much to say about the world view of respondents. Supernatural causes attributed to certain diseases, for example, are mentioned without comments. None discuss Sitala, the goddess of epidemics, in connection with measles. Yet this theme was a recurrent one in my own field work and the traditional cure for measles is a rich expression of how the community (mothers) deal with contagious diseases. Caring for a sick body cannot be disassociated from devotion to the goddess and restoration of a moral order.

The different pictures which short term reports represent should be interpreted judiciously. The various aims pursued, the quality of the relationship between interviewers and interviewees, their respective gender and hierarchical position may account for quite different representations of a same reality.

1.3 The Status of EPI

The Bangladesh government's immunization services began in 1979 and today coverage remains very low. In 1985, a plan to intensify EPI was developed starting with rural areas and using the upazila as the basis for operation. Cities and towns which represent roughly 17 percent of the population lagged behind in this strategy. The organization of urban EPI represents a particular challenge. Health services are under several authorities which include, besides the Ministry of Health and Family Planning, the Ministry of Local Government, Rural Development and Cooperatives, as well as individual municipal governments. This makes the

organization of a well coordinated effort more time consuming and difficult. Dhaka, the capital, with a population of 4.3 million (a quarter of which lives in slums) represents the biggest challenge of all.

As this study was conducted (March-April 1989), the Dhaka immunization programme had not yet been launched although a mass media campaign had been initiated. Some NGOs have been actively promoting immunization for a number of years in their catchment area and coverage in some wards is believed to be as high as 80% (i.e. Radda Barnen in Mirpur). Nonetheless, there remains large pockets which have not been reached with the message and/or the services. Vaccination centers, including both government and NGOs, are presently unevenly distributed and insufficiently equipped to meet the needs for a universal coverage.

1.4 Slums of Dhaka

According to a recent study performed by the Centre for Urban Studies (CUS) of Dhaka University, about one million people live in slums and squatter settlements (better known as bustees) in Dhaka city. 1125 clusters of ten or more dwellings have been recorded. Three quarters of these have been started in the last 17 years. It is said that bustees in Dhaka are very fragmented. "The majority of the slums, especially in the older part of the city, are very small and are characterized by small pockets in concealed locations (8)"

Slums are erected on private land and the occupants must pay rent whereas squatter settlements are built on government or semi-government land. Slums, generally known as bustees have been on the increase recently due to the fact that the scope for squatting on government lands has been diminishing very rapidly.

None of the people visited during this study were squatters. Some of them had been in the past but were evicted and were unable to find another squatter settlement. Some tenants pay rent only for the space they occupy and erect their shelter themselves while others rent a room. The first arrangement is cheaper but as landlords increasingly wish to invest and make a profit they build houses and install amenities such as electricity, water and gas. The rent and the landlord profits increase accordingly. In my survey, rent varied between 60 and 450 takas per month, with an average of 300 taka. Where land rent is very cheap (i.e. some parts of Tanary Moor), there are bustee dwellers who build three or four houses on the piece of land they rent and they themselves become small landlords. There is a tendency to subdivide rooms which are not large to begin with and sublet these for a small profit.

As available space in the inner city becomes saturated, slums develop in the peripheral zone. Presently there are 60% on the fringe of the city which are rapidly increasing.

Rayer Bazar and Hazaribagh, where the fieldwork was concentrated, are situated on the western outer limit of Dhaka, along the River Buriganga (see map). These are old parts of the city where most of the bustees have been built on the very edge, over land which was previously used as rice fields. Some bamboo houses, one, two, and up to four stories high, are

erected on bamboo stilts over the low land. One gains access by climbing a ladder, a difficult task for small children and old people. The upper platforms are often open without railings. When the river rises the structure is quite dangerous. Mothers complain that their small children require constant supervision, preventing them from doing their work. Several accidents occur every year in which children are drowned. In April nearly all of the houses were in great need of repair as a result of severe damage from the September 1988 flood, the most destructive in fifty years.

In Hazaribagh, large bustees of three to four hundred houses have been built on patches of land raised with transported earth. This is a considerable investment on the part of the landlord who puts up a bustee in the expectation that the land gains value and that he may eventually be able to erect buildings. The westward expansion of Dhaka is problematic due to the surrounding lowland and yearly flooding.

Most of the bustees visited are flooded every year. People must vacate their fragile dwellings and each monsoon provokes a tremendous movement of displaced people. This, among other things, affects the work of clinics. The latter have a sudden increase of temporary, new, patients while the old ones cannot be found to follow up on previous visits.

1.5 Research Methods and Location of Field Work

The reason for selecting Rayer Bazar and Hazaribagh, at first, was personal convenience but it turned out to be particularly interesting. Three types of situations could be observed. People to the north of the strip had a long acquaintance with the New Life Centre, an NGO operating in nearby Mohamedpur since 1973, which provides a whole range of MCH services. It was here that awareness about vaccination and the number of vaccinated children was the highest. In the center of the strip (in Tsorotghata), a very poor population was found which was reached neither by the message nor services. Finally to the south, in Tanary Moor and Moneswari Rd., in Hazaribagh, some mothers were regular visitors to the Zigatola Staff Colony Dispensary (which is under the authority of the Civil Surgeon). This is where they got their children immunized. The Staff Colony dispensaries do not provide integrated MCH services. Maternity cases are referred to the Azimpur Hospital and family planning to the Model Clinic. Vaccination is seen very much as a service unrelated to the work of doctors and is given once a week by a visiting vaccinator. Field work provided a good range of contrasting situations which were useful to compare.

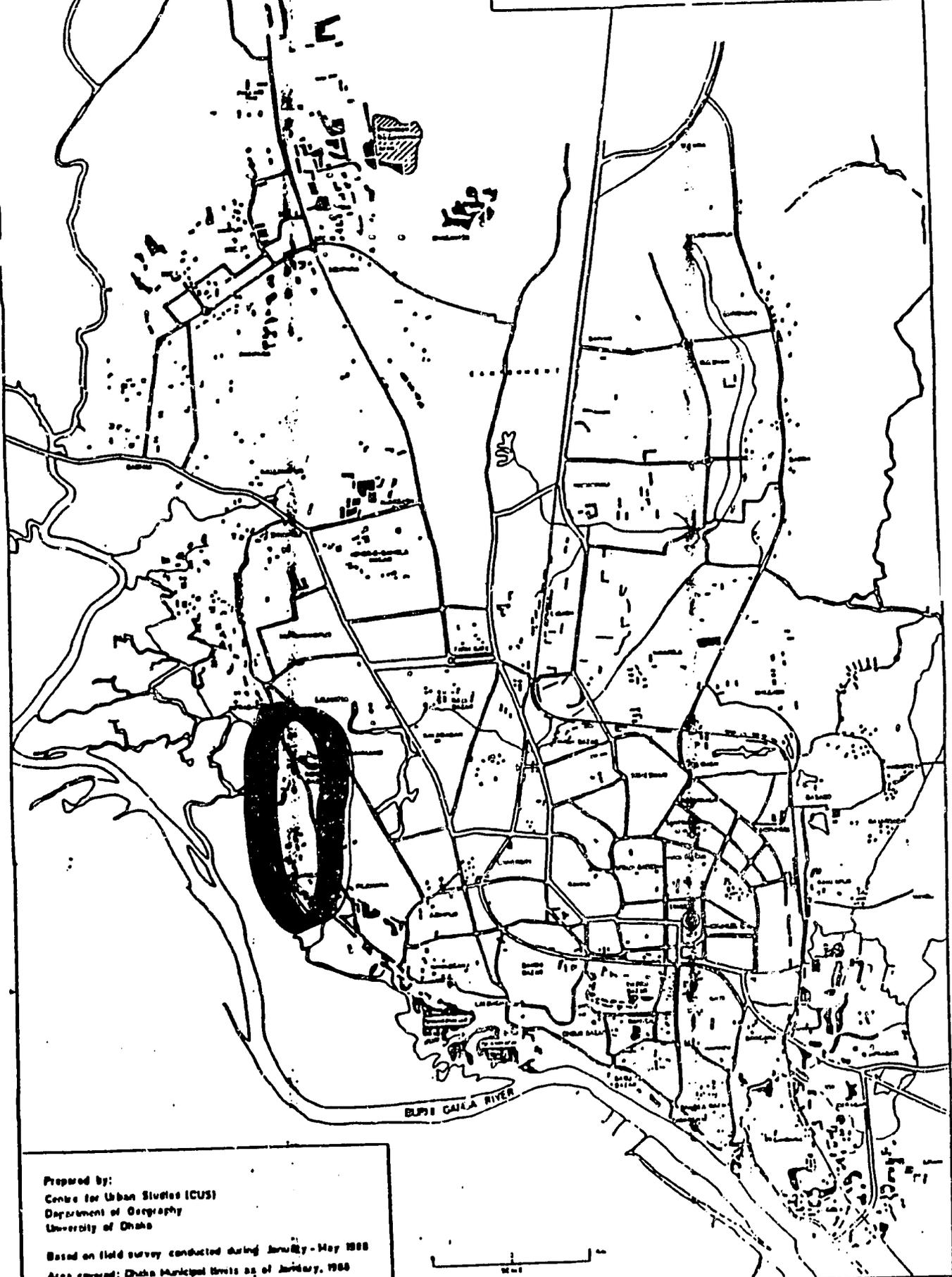
Bustees visited were varied. Some were long established enclosed compounds with relatively stable, village-like communities. Others were far more open and unstable with little group cohesion, poor leadership, and a relatively high proportion of social deviants. In old Dhaka (Hazaribagh), bustee dwellers appear to be seen as outsiders and as temporary residents with few rights. There were complaints that local power holders easily bypass them when they distribute relief goods or other favors.

There are no government schools, dispensaries, or mosques in the bustees. Ironically, the Rayer Bazar and Zigatola Staff Colony Dispensaries, where the government immunization centers are located, see

SLUMS IN DHAKA CITY, 1988

(SLUM AND SQUATTER SETTLEMENTS OF 10 OR MORE HOUSEHOLDS)

■ Slum Area



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Based on field survey conducted during January-May 1988
Area covered: Dhaka Municipal limits as of January, 1988



4A

very few children who are from the Staff Colony itself because most of the women are family planning users. Bustee dwellers who produce many children, on the other hand, have no government health facilities nearby.

Eighty women, mothers of ninety children aged three and below were interviewed in their homes. Information about marital status, education and occupation of self and husband, income, rent, years of residence in Dhaka and immunization status of self and children were recorded systematically. Then, the interviews branched off in many different directions. For example, in bustees where there was a measles epidemic, conversation focused around it. If the child wore several amulets testifying attempts to cure past illnesses or simply given as preventive measures, the occasion was used to discuss different methods of cure and prevention.

All interviews were conducted personally by the anthropologist in the presence of an assistant who was a bustee woman herself. The assistant was useful to remember the words that had been said, add credibility and help initiate contact. She was an excellent source of information herself. On the whole, bustee women were found to be much more accessible and open than village women interviewed in earlier fieldwork in Bangladesh.

Contrary to the situation in village fieldwork, the first encounter in bustees often yielded more information than subsequent visits. For this reason and because in a short time it was necessary to get to know different types of situations, we kept moving and visited several bustees.

The documentation on immunization was easy to obtain as the women were candid about the subject, especially in their choice to accept or reject it. It is much more difficult to get accurate information about sources of income or the number of times a woman has been married, for example. History can be easily fabricated when residents live in temporary situations. In one particular bustee where we saw children in very poor health and suspected organized prostitution, our repeated visits were met with hostility. Mothers were not interested in immunization and did not want to talk to us.

Vaccination centers were visited and, if possible, vaccination sessions were observed in the clinics that informants knew and/or voiced an opinion about. A few doctors, nurses, compounders and vaccinators were interviewed. A more thorough and in-depth study of perceptions and attitudes of health providers would be very helpful and interesting; however, due to time constraints this could not be pursued.

Note that quantitative data were collected on a very small scale. The collection of statistics was not the aim of the study, as we believe it is not the most appropriate method used to grasp values, perceptions and attitudes.

2. DESCRIPTION OF INFORMANTS

2.1 Vaccination Status of Children Aged Three and Below

Very few mothers had kept the vaccination cards which are supposedly given at the clinics. Many had lost them during the last flood, others explained that having completed the full course of vaccines they threw it away since it was no longer needed. In these cases, the mothers words were taken without evidence and there could possibly be some inaccuracy in their reporting (probably over-reporting rather than the opposite). Nonetheless, the following figures give an idea of the trend.

- Out of 90 Children, - 14.4% had been fully immunized
- 27.7% had been partially immunized
 - and 56.6% had not been immunized at all.

Among those who had been partially immunized, it may be useful to distinguish between children whose mothers did not intend to pursue and those who were in the course of immunizing and intended to pursue. The first category represented 12.2% and the second 15.5%.

In all, 68.8% of the children had not been vaccinated or had started the course but the mother did not intend to complete. These are the children whose parents still have to be reached and convinced about immunization.

2.2 Mothers' Education

Questions were asked about both the mother' and fathers' education. 86% of the mothers and 64% of the fathers were illiterate. These figures are comparable to the national literacy rates for the rural areas. Among literate parents, the differential between fathers' and mothers' educational level is uniform, men being generally better educated than their wives.

As expected, mothers' literacy is shown to be positively related to the incidence of immunization. 69% of the literate mothers had completed or were pursuing the immunization of their children as opposed to 25% among the illiterate.

TABLE 1

	Illiterate	Literate	Total no. of mothers
Child not immunized	40	4	54
Partially immunized but not pursuing/	10		
Child fully immunized	12	4	26
Partially immunized and pursuing	5	5	

2.3 Mothers' Occupation

65% of the mothers interviewed were not employed. This is a high percentage given their poverty and their desire to earn wages. Women with small children are not representative of bustee women as a whole in this respect. As may be expected, they attend to household business more than others. Many mothers had been employed in the past but gave up their job because they found it impossible to combine with the care of small children.

The majority of women work as domestic servants and are seldom allowed to bring their small children with them to work. This work is usually on a part-time basis, so some women combine two or three jobs for different families. The income is very low. It varies between 60 and 300 takas (\$1 = 32 takas) per month. In addition some employers are generous with food and clothing while others are not. An older sibling may bring the baby to be breast-fed if the mother works close by but most of the time this is not possible.

Breaking bricks on building sites is seen as a job which is hard but easier to combine with the care of a small child than that of maid servant. Mothers who have no one to look after their small children opt for this occupation.

Two mothers who have one child each work in a garment factory. They stay away from their babies at least ten hours a day and at least half of their income is spent on buying powder milk. One mother earned 900 takas per month and the other 1,200. Their bottle-fed babies looked unusually fat and healthy.

Only the two garment factory workers, who are relatively well-paid, have the attitude of career women towards their jobs. They are family planning users and are determined to have few children and take good care of them. Vaccination is part of this good care. Also, there are a few bustee women who work as maids in middle class families. They are exposed to the ideas of this milieu and wish to imitate their employers. Like them, they may vaccinate their children.

But most working mothers are simply overwhelmed by their numerous responsibilities. Besides physical exhaustion, some do not have mental energy left to even form an opinion about immunization. Vaccinating a child is not seen as an emergency and they can only find time for their most pressing needs like finding food to fill empty stomachs or going to a clinic to cure a child who is seriously ill. A few of these mothers are the sole wage earners of the family. They cannot afford to miss a day of work.

It may be stressed here that the scarce time of working mothers is not taken seriously by most clinic staff and vaccinators. Because bustee women on the whole are poor and do humble jobs, they are expected not to complain when they are made to wait for two or three hours. The clinic staff seems to be unaware of the fact that sometimes a long wait may mean no work, no income and no food for these women and their children.

The young children of mothers who work outside for long hours are often in very poor health. They are deprived of breast milk for most of the day and substitute feeding is not adequate. Children are fed semolina or a thin porridge made of rice or wheat flour. To this a very small quantity of powder milk may be added. The mixture is usually being fed by bottle. The child caretaker, often only a child herself or himself, does as she or he is told and does not make decisions about clinic visits or immunizations.

Women caught in a struggle for survival often have difficult choices to make. One such woman had a severely malnourished six-month old child whom she had left at home three days after birth to go back to work. She explained that her work was supporting three older children and herself and even if it was incompatible with caring for and mothering her six-month old baby; she had no choice. The mother had given up on her youngest child and, sadly, was prepared for its death. Her breast had dried up and the child desperately sucked to no avail. Ironically this woman was employed by a homeopath doctor who was generous with gifts of medicine when her children were ill but her small salary (Tk 150 or us\$5 per month) did not allow for feeding them properly. The husband, who was ill, could not support the family. Needless to say, this mother had not vaccinated her children and was not prepared to listen to any message about vaccination.

To sum up, the employment of mothers is a factor that can influence attitude and behavior towards immunization. Those for whom everyday is a struggle for survival are sufficiently occupied with daily problems. They have no energy left to plan ahead and often they have no time to bring a child to the clinic for immunization. Others, especially those employed in the modern sector and earning more have a different outlook. They have

some control over their life. They wish to better themselves and have ambitions for their children. Immunization is perceived as something beneficial which is worth taking a day off work if necessary.

TABLE 2

Occupation:	No of mothers	%
Housewives	52	65
Domestic servants	18	22.5
Brick of stone breakers	4	5
Home based quilt and embroidery workers	2	2.5
Garment factory workers	2	2.5
Fishing net maker	1	1.2
Prepares food to be sold on the street	1	1.2
Total	80	100

2.4 Marital Status

In monogamous union: 86%

In polygamous union: 10%

Without husband: 4%

There is a relatively high degree of marriage instability within the bustee with a large proportion of women providing for themselves. This is not so prevalent among women with small children. In our survey, nearly all of them had husbands. Those who did not have husbands had children out of wedlock, a situation which is never admitted openly but is only inferred.

The data does not allow much to be said about the correlation between marital status and vaccination. The decision to vaccinate one's children usually rests with the mother. This appears to be so especially among the poor. Wives of rickshawallah, which is the main occupation for men in the

bustee, sa, that their husbands are out all day and it is the mother's decision to see what health interventions are best for her children. Women require a husband's tacit permission when they go out of the house and his agreement when expenses are involved. Poorer men who, in any case, have meagre financial support to offer are often more agreeable to having their wives manage it.

The only women who mentioned that they did not immunize their children because their husbands did not give permission belong to the lower-middle classes who live on the edge of the bustee. They are fully supported by husbands who are regularly employed as drivers or as permanent staff at the factory. Lower-middle class women observe seclusion or parda more than the very poor. Most of them have never held a job and they have few reasons to go out. Some of them are socially very isolated. They are dependent upon husbands and sons in their contact with the outside world. A wife's seclusion is a source of prestige for the husband.

In this lower-middle class the wives' and husbands' relationship with the medical services is interesting to compare. A woman explained that for a vaccine, as for medication, she goes to the government clinic during the day and sees a lady doctor for free. But if her husband goes, he will see the same doctor at night as a fee paying private patient. The latter is a matter of prestige which motivates much of male behavior. Some lower middle class men who earn well but have little education forbid their wives to take their children for vaccinations, arguing that, unlike the poor, if their child is ill they have sufficient money to go to a doctor and get good treatment showing total ignorance of vaccines' action and misunderstanding of prevention. The wives did not have the courage to oppose their husbands.

A recent study on attitudes and responses to immunization in a rural part of Bangladesh performed by Worldview International Foundation (WIF) states that about 60% of the mothers reported that their husbands made the decisions about whether or not to vaccinate the children (7). This finding which is given without comments is astonishing and may not be attributable only to the different characteristics of this rural population but to the formal character of the interview where respondents may have stated the norm and nothing else. In rural areas especially, the norm requires that a wife recognizes her husband as the "malik" or master, out of respect, regardless of his actual function. A wife needs her husband's tacit permission whenever she steps out of the compound and moves into the "outside," male space. However, in the last few years, attending clinics with their children has become a very acceptable outing for a married woman who may otherwise observe quite strict parda.

In this patriarchal society, mothers are the care takers of children. Fathers become involved in admissions to hospital, and cases of serious illnesses. Surgery or expensive treatment, for example, would require their consent. But with health care dispensed from a clinic, including immunization, the ability of a mother (sometimes with the help of other female relatives) to take the initiative and then convince the father that the child needs a particular intervention is important. Fathers have formal authority but few men and women would disagree that the care of

small children's health is women's province. I believe this remains true across the board in spite of the fact that the degree of autonomy women are accorded varies among classes and regions of Bangladesh.

It is most important that the distribution of responsibilities between parents be well understood in order to formulate appropriate messages for a vaccination campaign.

2.5 Mothers' Religion

Out of 80 mothers, all were Muslims except for 5 who were Hindu. The numbers are of course too small to make any generalization regarding immunization behavior. The Hindus encountered in the bustees all belong to traditionally low-ranking occupational groups such as cobbler (mutchi), fisherman (jele), and goldsmith. They form clusters which are easily identifiable from those of the Muslims. All the Hindu tenants rent from Hindu landlords and all the Muslim tenants rent from Muslim landlords.

The educational status of the poor Hindu mothers and the vaccination coverage levels for their children under three did not differ significantly from those of the Muslims. There is some indication, however that, as in other parts of the country, Hindu mothers are more likely than Muslims to give birth in hospitals or maternity homes where they are likely to receive tetanus toxoid injections. Interestingly, the immunization they receive does not seem to entice them to have their children vaccinated.

2.6 Length of Residence in Dhaka

TABLE 3

Immunization of children below three years	Years of residence in Dhaka:				
	1 - 4	5 - 9	10 - 14	15 - 19	20 +
Completed	2	4	2	2	4
Ongoing	5	-	2	2	2
Started and discontinued	5	3	-	2	2
Not immunized	11	15	8	11	8
Total	23	22	12	17	16

As can be seen from Table 3, the number of years of residence in the city does not seem to have any impact on immunization behavior. Mothers who have been living in Dhaka for more than 20 years do not immunize their children any more than those who have been here for less than five years. This contrasts with findings elsewhere, i.e., Garenne's in Dakar, Senegal, where length of residence in the city was positively related to immunization coverage.

Many bustee mothers had their children hospitalized at the Children Nutrition Unit, at the ICDDR,B, at the New Life Centre or in one of the government hospitals. Dhaka offers more medical resources to the poor than do the rural areas, but judging from the experience of informants the emphasis is on cure rather than prevention. Government hospitals do not teach mothers about immunization and do not immunize the children when they are hospitalized. It was apparent that mothers whose children had been vaccinated during a short stay at the ICDDR,B, did not understand the benefit of this intervention and do not seek further vaccinations after returning home. However, the Children Nutrition Centre and the New Life Centre do seem to have a more positive and lasting influence in encouraging mothers to utilize vaccination services. Once they have received their first vaccination services through one of these sources, many of the mothers return with their children to complete the course.

In Dhaka, medical and pharmaceutical shops abound; where government or NGO clinics do not exist, one of the former can always be found. They offer medicines at all prices and for all sorts of illnesses. Bustee people consult them regularly. To some extent they may have replaced the fakir and the kobiraj, to which villagers resort. The "small daktars" of various descriptions which have a practice near the bustees are not known to promote vaccination.

The increased contact that the urban poor have with allopathic medical institutions is manifest in the vocabulary they use, which includes more English terms. Perhaps spirits like "bhut" are mentioned less often as a cause of illness, but on the whole the cultural matrix which structures the world view of a largely illiterate peasantry is still shared by equally illiterate bustee dwellers. This will be exemplified below when describing home cure for measles. Of course, the city has its own style and fashions. I was told repeatedly that a woman who has just come from her village is "bokka," i.e., ignorant and naive, and that the women who have been in the city a long time "clever." How this affects the development of a world view and how it affects health seeking behavior is not clear. Many questions remain unanswered. The short time allocated to the present study did not permit the kind of in-depth study of bustee society which would have enabled better understanding of the subtle transformation which may occur in the environment of the urban poor.

3. PERCEPTION OF CHILDHOOD DISEASES

Mothers divide illnesses affecting children (and adults) into three broad categories. Those which require a doctor, allopath or homeopath, those which require a fakir, and finally those which are best cared for at home. Each disease calls for a certain type of treatment and each type of treatment tends to correspond to a different cause. As the synopsis below shows, the situation is much clearer for certain diseases than for others. Measles, for example, is definitely an illness to be treated at home. Once the rash appears, the symptoms are easily identified and the prescription for the cure is precise, elaborate and well known. But for a cough that develops into further complications, such as whopping cough, treatment could follow a variety of actions.

PERCEPTIONS OF IMMUNIZABLE DISEASES

DISEASE	MEASLES	TETANUS	WHOOPIING COUGH	POLIO	DIPHTERIA	TUBERCULOSIS
Category of people believed to be infected	Children	Children Women	Adults Children	Adults Children	Adults Children	Mainly Adults
Source of remedy sought	Home	Fakir Doctor	Home Doctor	Fakir	Home, Doctor, Fakir	Doctor (injections)
Other characteristics of the disease	Culturally important, well-defined Treatment involves elaborate prescriptions including offering to sitila	3 Types: 1) <u>Tetanus</u> affect parturients if the disease is caused by too much cold doctor is called if it is from bad air fakir is called 2) <u>donosh-tonkar</u> infection after a cut this calls for doctor 3) <u>kichuni</u> neo-natal tetanus which is best treated by fakir	Cause: Complication from a cold Good care not given on time	Magical cure sought but mostly uncureable	All types of cures may be tried out Ill defined Associated with too much cold	Contiguous = AIDS Deadly Bears social stigma

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Similar symptoms could have different causes. For example, diarrhea, vomiting and fever may be caused by eating bad food or may result from an attack by a malevolent spirit. The treatment will vary according to the assumed cause. There is often a period of search and trial about the best treatment until one is found to be effective. The cause of the disease is then retrospectively confirmed. The search is not a random one guided solely by pragmatic considerations. It is informed by culturally defined explanatory models or conceptual paradigms which serve to interpret the problem.

The medical pluralism which is alluded to when mothers speak of doctor, fakir and home cure has been widely discussed in medical anthropology (10,11,12). Bhattacharyya has stressed the importance of making analytic distinctions among the various domains which are implied in this pluralism from the point of view of the client. We may adapt her framework which has been developed for psychiatric patients in Bangal.

First, the client experiences institutional pluralism when she must choose between at least four medical systems, each having its own theories regarding health and disease, its own practitioners, methods and remedies. As stated above, slum mothers in Dhaka recognize allopathy, homeopathy, fakir and home cures.

Second, there is cognitive pluralism; the client-patient has to choose between explanatory models through which symptoms become indigenously recognized phenomena. Three cognitive paradigms have been identified as follows:

- illness may be given a physiological explanation, such as too much heat in the the body.
- it may be attributed to attacks by a spirit or some other occult forces which strike through the evil eye or bad air.
- or, it may be seen as a punishment from God, or a moral authority, for committing a sin or infringing rules.

Third, structural pluralism refers to the conflicting perspectives of specialists and clients, the fact that the cognitive paradigms of the parties in the encounter are incongruent. They may stand in a relation of completion, exclusion or inclusion in a hierarchical order. Thus the allopathic practitioner and the medical system he represents may be accorded a position of dominance in relation to fakir or home cure.

Expansion on the implications of these various aspects of medical pluralism would provide a framework to yield useful insights for further research. The mechanisms which induce care seeking behavior are obviously complex and multidimensional. In some instances the perception of the illness, i.e., the diagnosis, prompts care seeking behavior; in other instances (for example, with immunization) a trusting relationship with the care provider could encourage care-seeking. Each domain of medical pluralism needs to be considered individually.

In Bengali health culture, symptoms are often interpreted differently when they are manifest in an infant, a young child, a pregnant or parturient women -- for these categories of people are "known" to be vulnerable to the attacks of spirits (or the evil eye or bad air). We shall see below that the symptoms of tetanus or tuberculosis are likely to be given different explanations when they occur in a small child than they will when occurring in a grown man. Some women informants maintain that tetanus is a disease which only affects neonates and fertile women. Women are vulnerable to it during pregnancy, at childbirth and during the post-partum period. Women and children are the prime users of fakir treatment, which relies on amulets, incantations, knotted threads, holy water, blows, etc.

Doctors are more often consulted for diseases which are given a pseudo-scientific explanation, although not exclusively so. Men use doctor's medicines, especially allopathy, more than do women and children. In part this is a question of cost and prestige (men's health being considered the most valuable) but it is also linked to the interpretation of diseases. Fakir's treatment is used when the disease is believed to be caused by a spirit. Finally, home based remedies are constituted with elements of every day life. Domestic objects -- common food, plants, metals -- are endorsed with symbolic meaning and power. Curative gestures are sometimes performed as rituals. The home based cure, as will be seen with measles, may serve to restore a moral order which is necessary for health by drawing anew the boundaries between pure and impure, inside and outside, the wild jungle and the well ordered home.

To sum up, allopathic medicine - of which immunization is a part - constitutes only one of a number of alternative means to deal with childhood diseases.

In the next section, each of the six diseases which are the targets of the vaccination program -- tetanus, measles, whooping cough, poliomyelitis, diphtheria and tuberculosis -- will be explored. The perceptions of these diseases and their treatment will be enumerated. It should be stressed that no precise correspondence between the definition of diseases in the biomedical system and the understanding bustee mothers have of the same labels, should be assumed. The degree of overlap in meaning between the categories of the various cognitive or cultural systems is an important matter to investigate.

3.1 Tetanus

Tetanus toxoid is no doubt the vaccine which has received the greatest publicity in the last ten years in Bangladesh. When mothers are asked which diseases the vaccination campaign is addressing, tetanus is the one which is never omitted. The traditional Birth Attendants (TBA) training programmes and ante-natal clinics have contributed to increase awareness about prevention of tetanus which has been the object of a campaign by itself, before the EPI was launched. To what extent this teaching has displaced the traditional explanation for the symptoms of tetanus which were well known in infants is interesting to explore.

My informants referred to tetanus as:

- tetanus
- donoshtonkar
- kichuni.

To some informants, "tetanus", "donoshtonkar" and "kichuni" signalled three different diseases. Tetanus, the English word used in the midst of Bangla speech is said to be a disease of the patient who suffers from convulsions and spasms. Such convulsions and spasms are sometimes also associated with eclampsia. "Donoshtonkar," a high Bangla word used by educated people, is said to be a disease "for the doctor" which occurs when poison enters the body through a cut or a wound. Finally, "kichuni" is a condition affecting the newborn in the house of pollution soon after birth. It is a disease for the fakir. Here "tetanus," "donoshtonkar" and "kichuni" are understood to have different causes and require different treatments. In this case, teaching about tetanus has not modified the category "kichuni" but seems to have created one, or possibly two, new ones.

The symptoms of tetanus, i.e. convulsions, spasms, stiffness traditionally has been attributed to the possession of spirits called "bhut" or "bhut petni." What allopathic medicine calls neo-natal tetanus is well recognized and mothers know that it is nearly always a fatal disease. It is said in some areas that a "bhut" called Chorachuni comes to steal the baby from the house of pollution where mothers are confined for a number of days following birth. Hindus usually build a separate hut for the confinement while Muslims partition a corner of the family house for the purpose. The period of pollution varies according to caste and regional tradition. For the Hindus it is usually about 30 days, whereas for the Muslims, the Quran states that it should be 40. The various cleansing rituals which are performed on the sixth day, the fifteenth day and so on suggests that pollution gradually decreases. The wild spirit which is believed to cause tetanus is attracted by the pollution of a child birth. Fighting this spirit is often a lost battle and some mothers give up their baby before it dies in the belief that their real child has been stolen and the child left in their care is a substitute placed there by the spirit.

A mother whose child has tetanus is often isolated. The spirit inhabits the child and could attack other vulnerable women and children. "Bhut" belong to the jungle and to the wild. They are attracted by unfinished, raw beings, they have a voracious appetite for women's eggs symbolizing both their sexuality and their fertility. It is a same family of uncivilized spirits who possess new brides, and parturient women, kill fetuses in the womb and newborn infants just out of the womb. All fertile and sexually active women are vulnerable to the attacks of "bhut." A same spirit may "eat up" a newborn child and then go on to kill a parturient woman who lives nearby. He may possess a bride so that she will not want her husband or will frighten him away. After killing a woman's child or preventing her from conceiving, a "bhut" may continue to live with a woman to control her sexuality. A wife who cannot get rid of a "bhut"-lover may refuse the sexual advances of her husband for many years. The latter must excuse her, for it is not she but the spirit who is acting. It is said

that "bhut" manipulate women and women manipulate men through "bhut." Men obviously fear women and their sexuality which is considered too wild and dangerous. It cannot be contained and spills over attracting uncivilized forces. Women are not morally blamed when this happens; they are outside the realm of morality and belong to nature.

"Bhut" use different entries into the body. They possess women by penetrating the birth canal. Spasms and convulsions in a parturient, which could be tetanus, are often explained by a fall towards the end of the pregnancy. Needless to say the birth itself leaves the mother dangerously exposed for some time. "Bhut" attack infants through the mouth by preventing them to suck, by spoiling their mother's milk, by provoking vomiting and diarrhea. They may also strike through bad air (batash) or the evil eye (nodzor daoa). A child who loses weight and "dries up" is said to be attacked by a "bhut" (a common explanation for tuberculosis).

Many of the traditional birth practices are preventive measures to keep the malevolent spirits away. Such are the closing off of the house of birth through material or magical means, the keeping of a lamp burning from sunset to dawn, staying awake through the night since "bhut" so much of their evil work in the dark. Various objects are kept near the mother and the child: a piece of iron, the bone of a scarified animal, a broom, an old shoe, a fishing hook, a piece of a fishing net and amulets. These are preventive measures which are extremely ancient as some of them were mentioned in the Veda.

If "kitchuni" in a newborn or spasms in a parturient occurs, the treatment of a fakir will be sought first, the doctor will be consulted as a second recourse. This holds for the city where doctors may be gaining some credibility in the treatment of tetanus. Cases of neo-natal tetanus admitted at the Infectious Disease Hospital in Dhaka increased fourfold between 1985 and 1988. Considering there are not less but more pregnant women being immunized against the disease, this increase suggests that "kitchuni" is slowly becoming a disease for doctors. When I did field work in a village of Jamalpur district in 1979-80, no parents would consult a doctor for neo-natal tetanus. They regarded the doctors medicines useless to fight the spirit.

3.12 Vaccination against tetanus

Health workers at Radda Barnen, the New Life Centre and Azimpur Maternity Hospital give great emphasis to ante-natal care. Over the last three years tetanus toxoid has become increasingly popular and it is women's main purpose for attending ante-natal clinics. This shows an interesting change in attitudes, for in the past the very idea that a pregnant women should visit a clinic and go for check-ups was incomprehensible. Women in that state, even if ill, would refuse allopathic medication in the fear that it would harm the fetus and provoke an abortion. Some women still feel this way because they believe that the vaccination needle might contain a contraceptive. But on the whole, the new attitude is rather positive. Do women clearly understand what TT injections prevent? This recent interest is hard to reconcile with the fact that tetanus (at least in its neo-natal form) is believed to fall largely outside the realm of allopathic intervention. But even if

confusion remains, it may suffice that women should consider immunization as beneficial to their health in a general way like the vitamins which are often given on the same ante-natal visits.

Middle class women are well represented at ante-natal clinics and they are probably positively influencing poorer and less educated women to do the same. Middle class women go to private practitioners for medicine, but they have greater trust in the clinics when it comes to vaccination because the cold chain system in the clinics is said to be more reliable.

Only a minority of the bustee women I interviewed had been vaccinated against tetanus, but this is not because they have strong opinions against it. For this disease in particular women seem to be easily convinced. Tetanus is frightening. Unlike measles, it is not regarded as a disease mothers can manage. Fakir treatment may be best, but their rate of failure is very high. And the agent which is believed to cause tetanus, Chorachuni or another "bhut," is not the object of any devotion. If there is a vaccine to render the latter harmless, it may be all the better.

It does appear that the success of TT vaccination depends very much on the provision of dependable services through health workers who are trusted by the community (and thus cannot be suspected of giving a contraceptive instead of a vaccine). The middle classes now understand the benefit of this vaccine. A mother used the fact that her daughter had been vaccinated as example that her daughter had married into a good family and was well looked after by her in-laws. She described the marriage presents offered, the two TT injections the husband ensured she got during pregnancy, and the fees paid at a private maternity home for the birth of the child.

The change of attitude towards TT injection is encouraging. Now, far more should be done to reach the poor and uneducated where belief in the spiritual cause of tetanus is likely to be the strongest.

3.2 Measles

Measles is referred to as:

- ham
- lunti
- bapi
- phera (which also means misfortune)
- measles (used in Bangla speech)

These five words describe a condition whereby the body is covered with red spots usually preceded by two or three days of fever. It is believed that "ham" or "phera" can affect the same child more than once, so measles is not well distinguished from other red spot diseases like German measles or roseole.

The symptoms of measles are familiar. It is something that nearly all children contract, and mothers believe that it is a good thing, for they believe that the spots let out some substance which would be harmful if left inside the body. Before the spots appear, the child is restless for

two or three days, then he becomes very calm. Eventually his old skin peels off, replaces by new skin. While measles is potentially dangerous, mothers feel well equipped to deal with the disease. The greatest perceived danger, and the time when most care is given, is during the eruption of spots. Complications such as pneumonia or diarrhea are attributed to a polluting contact or to the absorption of "cold" food at this time. The mother should show the greatest vigilance and strictly observe a number of rules which are described below.

3.21 A disease for mothers

According to discussions with one informant, measles is a disease which is best left to the care of mothers. The informants were quite emphatic about this. Consulting a doctor or a fakir, or using their medicines, during the seven days (some say three days) following the eruption of red spots is considered dangerous. Sitala, the Hindu goddess who is believed to have brought the disease is the only one who can cure the child. A mother herself, she will respond to the prayers and to the offerings of another mother but will be insulted by the use of doctor's medicine.

3.22 Sitala, the goddess of epidemics is responsible for measles

Contrary to expectations, Sitala the goddess of smallpox, has not been forgotten in Bangladesh following the eradication of this disease. She is said to work with her sisters, seven in all, and together they are responsible for seven contagious diseases which break out in epidemic form. The list given was not always consistent but it usually includes:

- smallpox (boshonto),
- chicken pox (djol boshonto),
- measles (ham, bapi, phera),
- mashi pishi (small spots which affect infants a few weeks after birth),
- some type of furunculosis called "lohagera" or "Mohorkalai", and
- cholera.

Sitala, the goddess of epidemics is truly feared. It is said that if someone dies from one of the above diseases, the goddess will go on attacking and make more victims until she is pacified. In the past, Hindus and Muslims living next to each other joined efforts to seal their neighborhood and protect themselves against the anger and dangers of Sitala. Hindus offered pujas to the Hindu goddess in a way Muslims could not do. In a village of Barisal where I did fieldwork a few years ago, there were three pujas for which the Hindus sought the contributions

of Muslim co-villagers and made offerings on behalf of them all regardless of religious affiliation. These were the celebration of Lukkhi, the goddess/symbol of rice and prosperity, the celebration of the Bengali New Year and Sitala, the goddess of epidemics. Such practices are a reminder that in the area of health there is a great deal of continuity in the beliefs and practices of the Bengali whether they be Muslim or Hindu.

Not all the bustee women interviewed mentioned the name of Sitala in connection with measles. Like cholera it is said to be a word too frightful and inauspicious to utter. Moreover, women with some education did not want to acknowledge belief in a Hindu goddess for they found it inconsistent with being a good Muslim. All the same, it was noted that these women did not refuse participation in the collection of rice or money to make an offering to the goddess. Traditionally, this takes place during the months of Chatri or Boishak (mid-March to mid-May) which was the time of my field work, and I was able to observe the ritual in one bustee.

3.23 Making an offering to Sitala

The food offered to Sitala was prepared by an old Muslim woman from arisal to thank the goddess on the eighth day after her grandson had the measles spots. On that day, the house was thoroughly cleaned, quilts were washed and new mud was smeared on the floor. Then the grandmother went around the 26 houses of the bustee and collected either rice or money from each of them. She sent word to the father of the child to buy a new "kola" (flat basket used exclusively by women to clean the rice) and described how she would decorate it for the offering. With the money collected she bought lentils and spices and cooked these with the rice. The cooking had to be done at sunset. Such food prepared for an offering is called "shirni" by the Muslims. The first portion was set aside for Sitala. Some women told me that seven portions should be kept aside for the seven sisters, otherwise one of them might retaliate and cause more illness. "Shirni" offered to the goddess, or goddesses, is usually placed on the decorated flat basket or on a banana leaf and then thrown into a river, or a pond, but this part of the ritual I did not see. I was told that in the past, once the portion for the goddesses had been served all of the children and the breast feeding mothers were fed, songs and dances accompanied the ritual, but this was not done this time as my observations took place during Ramadan. In one bustee, it is a Hindu woman who usually makes the collection of rice or money and prepares the offering in the name of Muslims.

Interestingly, these offerings do not require priests, they do not require men, so much as to exclude them. These offerings are part of women's lore and are external to male orthodoxy whether it be Muslim or Hindu. Bengali women have their own rituals which they perform to promote fertility, auspiciousness and good health. This function which is upheld by married women and mothers especially is most explicit during the marriage celebration. On this occasion, men and women's rituals are held separately. Men pretend not to know and often ignore or diminish the importance of what women do. In Muslim society the right to perform women's rituals (meder ahar) is sometimes denied by men because women celebrate fertility, health and prosperity using the symbols of a culture which is strongly influenced by its ecological anchorage in the delta of

Bengal, its peasant economy of rice growers, and its proximity with Hinduism. Belief in Sitala is part of this heritage. She belongs to the soil of Bengal.

"Measles is a disease for mothers," my informants kept repeating. Men do not understand and do not know how to care for it. A mother who works outside may not interrupt her work because her child has diarrhea or is malnourished, but she certainly will if her child has measles. The various prescriptions to follow when a child has measles are described below.

3.24 Restoring purity

A child who has measles must be kept inside the house for seven days. The movements of a very young child are obviously easier to control than those of an older one, and for this reason mothers are pleased if measles occurs early. The child should be protected from polluting contact and no one except family members should enter the room where the child is kept. Pollution here refers to ritual pollution as defined in Islam and Hinduism; it is a religious concept and does not mean a germ-free environment. Pollution is associated with menstruation, parturition, sexual intercourse, defecation, death. A child cannot be harmed by his own mother if she is menstruating but extra care should be taken.

Bustee dwellers admit that it is more difficult to keep away from polluting contacts in the bustee than in the village. This is not a statement about environmental pollution but about society. The bustee groups many unrelated people whose cleanliness, or ritual purity, cannot always be trusted. The delineation of boundaries whereby pollution may be controlled and contained structures the world of our informants not only in a physical but also in a social and in a moral sense. These notions are central and permeate Bengali culture and society.

3.25 Cooling down harmful health

A child with measles (i.e. Sitala) is hot and should be cooled down. The need to keep the child cool is sometimes expressed as important for comfort and sometimes as a way to please Sitala who inhabits the child. Cleansing devices are also said to be cooling.

A special water is prepared which is fed to the child and sprinkled on the body as well as in the four corners of the house. This water is prepared as follows. A new earthenware pot must be purchased and filled with water in which a piece of gold, a piece of silver, and occasionally a piece of brass, are dipped. To this are added a number of elements which regularly appear in Bengali home rituals and are generally associated with cleansing, auspiciousness and good health. They include:

- unboiled milk
- dubla gatsh (a grass that cows like to eat)
- leaves of various trees (nim, mango, basil)
- turmeric paste
- a few bitter tasting herbs.

Other means to cool down include bathing the child in the fermented water which is poured over cooked rice to keep it from spoiling during the hot months, and rubbing raw turmeric paste over the body.

During the illness, the soil should be refreshed by smearing mud in the middle of the room and in front of the door. A branch of the nim tree may be hung above the latter. The nim tree is cooling and Sitala is said to save from measles houses which fall within its shade. A mother with a child suffering from measles should sprinkle water around that particular tree while praying to Sitala, said an informant. Note that in Jamalpur district, the nim tree which has many useful properties was generally planted some distance away from the compound because "bhut" often dwelled in it.

If the child needs to be kept cool this should not be overdone as too much cold could develop into pneumonia.

3.26 Leaving open the pores of the skin and the door of the house so that Sitala might come and heal

After bathing, Bengali normally oil their skin and their hair. This is an ancestral custom which has positive effects and meanings expressing cleanliness, well-being and occasionally attractiveness and beauty. Oiling must be omitted for a child sick with measles and the breast-feeding mother. Oiling closes off the pores of the skin and during measles this would prevent the bad substance in the spots from exuding and the disease from following its normal course. If the skin is oiled the spots will go underneath the surface, cause more complications, and leave permanent marks. Covering the skin with oil would interfere with Sitala's good work.

Healing sometimes requires leaving open what is normally closed. This was emphatically expressed by a mother who said that while her child was covered with spots she deliberately left him alone, at sunset, with the door opened and no lamp burning. In normal circumstances this is seen as extremely dangerous. A lamp must always be lit in the house as the sun goes down especially when a small child is inside. This is precisely the time when malevolent spirits are said to be around looking for a prey. Light will ensure the presence of Lukkhi the goddess/symbol of prosperity while the dark attracts "bhut". But opening the door of a dark room here was on the part of the mother an act of faith in Sitala who is seen as the strongest. She is invited to enter the house and spend the night there so that she may dispense her good care. The mother assured me that her house had no trace of pollution whatsoever so "bhut" attracted by the latter would not come and harm her child.

3.27 Diet: neither too "hot" nor too "cold"

The diet of a child who has measles, or that of the mother if the child is breast-fed, should be strictly regulated. He or she should not eat beef since Sitala is a Hindu. He or she should eat no fried food for again this may interfere with the normal exudation of a harmful substance. Uncooked oil can be taken but in very small quantity.

Fish should be avoided and under no circumstances can raw fish be taken inside the house of the sick child. This is because with fish comes sometimes dangerous spirits like "bhut" who could harm the child. If fish is bought at the market for the family, it should be carried with salt which somewhat neutralizes it. Fish is a major item in Bangladeshi diet. Different sorts have different properties and meanings which are used to produce various effects. Its avoidance or its consumption plays an important role in the management of illnesses. The end of the seven days should be marked by eating a white fish which has very small scales and is called "fola mash". (This prescription suggests that the scales of a fish may have a negative association with the rash of measles).

Other food to be avoided include cow's and goat's milk which could produce spots with white heads. There is no restriction on breast milk and mothers recognize that the child who is thirsty sucks often but not for long. Dark leafy vegetables which could leave permanent black spots on the skin, eggs and meat which are generally considered too hot should be avoided. The appropriate food should be neither too hot nor too cold.

Recommended food include boiled potato and boiled bitter vegetables in a preparation called "borta" which is eaten with white rice.

3.28 Mother's healing powers and those of doctors belong to different domains

When mothers care for a child sick with measles, they also enact a religious duty, they restore a moral order which is central to the Bengali way of life. By establishing purity inside and keeping pollution out, they stress the symbolic boundary between "inside" and "outside", between family and non-family. The prescriptions emphasize the symbiotic relation that exist between mother and child, mother's food, behavior, cleanliness having a direct impact on the child's health. The treatment of measles is a statement about the power of mothers who, like Sitatala, can both save and destroy life.

3.29 Vaccination against measles

The need to stay away from doctors and their medicines when measles breaks out is restricted to the seven days after spots first appear. There is no perceived danger if the child is vaccinated while he is free of diseases caused by Sitala or her sisters. But even so some mothers "forget" to return for the measles vaccine. One of them who had got her child fully immunized against the five other diseases explained that she did not regret her child having had measles as a consequence of not going for the last shot. She believes that since he was strong enough to get through and recovered, her child emerged renewed from this trial.

Measles is here seen as part of a normal cycle with which it is best not to interfere. The cycle is part of a seasonal change, measles epidemics generally occurring at the end of the Bengali year when one is supposed to clean house, body and soul, restore order and prepare for the New Year to come. The end of the year is seen as full of dangers, it brings cosmic disorder. Wild spirits float around, things are not in their proper place. Husbands and wives should not sleep together because sexual

activity and fertility may be endangered by cosmic elements which are out of control. It is a wife and a mother's responsibility to see that the threatening and wild forces be pacified and made harmless so as to restore an order which is essential for the prosperity of the household and the maintenance of good health. A child who has measles gives the mother the occasion to reenact a role which is highly valued.

What hope is there then to immunize bustee children against measles? Few women expressed a categorical refusal of the vaccine. Rather they give excuses like "I have no time" or "I forgot the date" which suggests that the measles vaccine, perhaps more than the five others, is not a matter of urgency to them. Measles vaccination campaigns performed by NGOs last September when many families had to find shelter in schools or other available buildings, reportedly, did not meet with any resistance. Families were then in a situation of dependency; food and vaccines often being dispensed by the same authority. "Doctors frighten us;" said a woman, "this is why I vaccinated my child. But I don't believe what they say. They exaggerate the danger of measles. Our mothers (the elders) know very well how to care for that disease."

There may not be an open resistance but, quite possibly, a certain slowness to respond to the measles vaccine. For this reason, vaccination messages addressed to women should be very carefully phrased. The image of the "good mother", her unique role in restoring health which is heightened in the traditional cure for measles should not be negated. The portrayal of a male doctor who knows everything facing an "ignorant" and "superstitious" woman should not be used in the campaign. Mothers' self-confidence should not be undermined.

3.3 Poliomyelitis

Paralysis from polio is rare but its effects are most dramatic and sudden. The condition is called "lengra lula" or "lengra batash". Its cause is somewhat mysterious but as the name "lengra batash" suggests, a malevolent agent is believed to travel through air and strike the victim.

A mother explained that "lengra lula" may occur as a result of "malaria fever" which is a very severe one. The heat of the fever instead of exuding, enters the body, especially the legs, destroys the bones and dries up the flesh rendering them useless. The condition is irreversible. Some believe that paralysis in a child occurs as a punishment of God for past sins of the parents. Others give a physical explanation and attribute the paralysis to general weakness of the body, exposure to cold and a deficient diet.

"Lengra lula" is not seen as a disease which mainly affects children but adults as well, in just as great numbers. It is a disease for which fakir will first be consulted, with the doctor as a second recourse, although once paralysis has occurred there is little expectation that the condition might improve.

3.31 Vaccination against polio

Awareness that there is a vaccine against "lengra lula" is practically inexistent. Paralysis is not seen as preventable through such means. The reason why it hits certain people and not others is said to be in the hands of God. It is a misfortune from which one may be saved by saying one's prayers regularly and remaining clean, say informants in a BRAC study

3.4 Whooping Cough

Informants do not recognize whooping cough as a disease distinct from a cough (kash). It is perceived as a bad cough which goes on for a long time. The word used by doctors, "myadi kash", is understood as such. The English word, whooping cough, is seldom used in Bangla speech. Informants were very unspecific in their description of symptoms.

If left uncared for, a bad cold could develop into conditions which are very serious. Diseases causing difficult breathing such as "haphani" (asthma), pneumonia (using the English word) or "jokka" (tuberculosis) were mentioned in this connection. Bad and lasting cough does not only occur in children, it is said, but affect old people as well. A cold that does not get well and develops into "myadi kash" is often blamed on the mother who has been negligent, giving the wrong food or committing some other mistake.

The first remedies for this condition are found at home. Once again, a breastfed child will continue to be so while the mother observes herself all food prescriptions. "Cold" food must be strictly avoided. This includes all left overs which even when heated up remain "cold" food and others such as banana, cucumber, melon, etc. Food which suggest the idea of irritation to the throat such as "kochu" are also forbidden. Various concoctions to be drunk as teas or oil to be massaged on the body are widely advocated. Hot drinks are made up with ginger, honey, crystal sugar, "tes patha", cardamom, clove, cinnamon and black pepper. The body should be rubbed with mustard oil which is "hot" to the exclusion of coconut or sesame oil which are "cold". For massages, garlic paste is also recommended and breast milk squeezed on the child's head is said to be beneficial.

When the cold does not get well, a fakir or a doctor may be consulted. Choking, difficulty in breathing, coughing blood (which was is by a few informants to be a symptom of whooping cough) may be attributed to a spirit, a powerful goddess such as Kali. The suspicion that a spirit is at cause may increase with the gravity of the symptoms and the category of patient, small children always being considered as potential preys for the voracious appetite of "bhut". Hence the necessity to consult a fakir. This does not prevent consulting a doctor as well which is done increasingly in the urban areas.

3.41 Vaccination against whooping cough

Since whooping cough is not well recognized as a distinct disease and is associated with cough, mothers either do not see what the action of a vaccine could do or else assume it will prevent all types of cough. Like vitamins, the vaccine may contribute to strengthen the body generally.

3.5 Diphtheria

The English name diphtheria suggests a frightening disease but descriptions of it are hazy and imprecise. Like whooping cough, diphtheria is seen as a complication from a cold which develops into sore throat and difficulty in swallowing. It is this last symptom which is seen as very serious since it could lead to death.

Informants responded to the English word diphtheria but could provide no Bangla translation. The BRAC study mentions two names for diphtheria: one in "galpash" which means slip-knot around the neck, and "golahar" which means necklace. If we read correctly, these expressions may just as well mean a severe sore throat.

Treatment suggested presents no set patterns. Diphtheria may be a disease for any or all types of medicine. The fakir, the herbalist (kobiraj) or the doctor may be consulted and of course home cure will always be tried out first.

In 1988, the Infectious Disease Hospital in Dhaka admitted 219 children with diphtheria, 16.4% of whom died. This compares with 48 cases of measles, 12.5% of whom died. The numbers are very small and show only the tip of the iceberg but the treatment chosen confirms our observations. Severe diphtheria cases are brought to the doctor much more readily than measles.

3.51 Vaccination against diphtheria

As for whooping cough, women have little to say on this question. They do not understand clearly the disease, they understand even less the action of the vaccine. This does not mean that mothers are not well disposed towards vaccination in general but then, as will be seen later, they regard it as a package which is generally not beneficial to health.

3.6 Tuberculosis

Tuberculosis which is referred to as "jokkha" is one of the better known diseases. It is perceived as a fearful, often deadly, condition which affects adults more than children. The recognized symptoms are those of pulmonary tuberculosis: cough, spitting blood, fever, loss of appetite and weight. There is a proverb saying that those who contract TB cannot recover: "jar hoi jokkha, tar nei rokkha".

Tuberculosis is known to be a contagious disease and some believe that, like AIDS, it may be transmitted by sexual contact. The illness is associated with infected blood and blood is seen as the vehicle of hereditary transmission. Semen itself is understood to be a form of

concentrated blood. In the BRAC study, a few informants suggested that over secretion of sperm or frequent sexual intercourse could be the cause of TB. For many years, tuberculosis has been an acceptable reason to cancel the promise of, or break up, a marriage. Still today, someone who dies from TB jeopardizes the marriage prospects of other family members and the cause of such death may be kept hidden.

The recognized symptoms of TB are those of pulmonary tuberculosis: cough, blood in sputum, fever, loss of appetite, loss of weight and energy. Mothers do not easily recognize TB in a child who has no energy, no appetite, fails to gain weight and regularly suffers from fever. Such conditions are more readily associated to the work of a spirit who is slowly "eating up" the child. Amulets obtained from a fakir is the treatment most likely to be sought. A doctor is not likely to be consulted and at clinics, TB is usually diagnosed when the child pays a visit for some other apparently not related health problem. Once the condition has been labelled TB, however, doctor's medicines gain credibility. Most informants recognize allopathy to offer the best treatment for tuberculosis especially if it is given through injections. Those who go to homeopaths and herbalists often regard these as second best since they cannot afford doctor's medicines for a lengthy period.

3.61 Vaccination against tuberculosis

If tuberculosis is well known, vaccination to prevent the disease is not well understood. As mentioned above, tuberculosis is not recognized as a childhood disease and the most common symptoms in children are identified as something else. Mothers may bring their children for the vaccine but they have a very vague idea as to which ill condition they are thus preventing.

4. UNDERSTANDING OF PREVENTIVE HEALTH CARE AND PERCEPTION OF VACCINATION

4.1 Traditional view of preventive health care

Maintaining health through preventive measures (i.e., a health style of life, bathing, appropriate type of food, etc.) is a concern which is pervasive in the lives of Bangladeshi mothers indeed probably more so than for Westerners who may have greater faith in medical cures. It must be said that prevention generally is not associated with doctor's needles and allopathy which are perceived as curative. The comments of some mothers who did not vaccinate their children arguing there was no need since they had never been ill confirms this view. Similarly, the mother who did not pursue the course of vaccination because her child's health, which was poor to begin with, had not improved expresses the same understanding of doctors' needles as being curative. In the VHSS baseline KAP survey, a quarter of all respondents expressed the view that there was no need for vaccination, showing the same lack of understanding of what allopathy offers. Unlike the authors of that study, however, we cannot say that informants do not understand the notion of prevention. They simply situate it elsewhere, largely outside the domain of allopathy.

Women, as mothers and as wives, have special responsibilities in preventing ill health for all family members. The means through which this can be done may be listed as follows:

- a) Selecting appropriate food which is suitable for the state of health of each family member, paying attention to the right balance between hot and cold and many other principles, some of which were mentioned above.
- b) Maintaining ritual purity within the home.
- c) Setting up a symbolic enclosure to prevent jungle spirits or "bhut" from entering and falling upon a prey.
- d) Participating in nature's renewal at certain dates of the year, i.e.,
 - eating bitter herbs in the month of Kartik to clean up the blood.
 - rubbing the skin with turmeric paste in the last days of the Bengali year to clean it and keep it free from infections.
- e) Providing amulets and "kaiton" or knotted threads for the protection of infants and small children as well as other fragile human beings such as pregnant women.
- f) Obtaining the blessings of elders.
- g) Doing one's duty, fasting, saying one's prayers, giving alms.
- h) Occasionally, making discrete offerings to pacify potentially dangerous spirits.
- i) Ensuring that all family members and even guests take a daily bath.

This list is not exhaustive but may suffice to show that good health does not only depend on care administered to the body but also one's relationship with God and the cosmic forces.

Which one of these measures to prevent illness is most comparable to immunization? A mother explained that vaccination was very much like a "jatishap" amulet which is made out of the skin of a baby snake called "jatishap" caught on a Saturday or a Tuesday. To her, the idea of protection through immunization is nothing very new. The doctors have their system, we have our own. Both operate with the same magic protecting a child from several illnesses the list of which is often forgotten or mixed up, so much so that one gets the impression that individual vaccines are no longer related to individual diseases. No one volunteered a clear theory explaining how vaccination works inside the body and perceptions have to be inferred from indirect comments.

Vaccinated or not, nearly all the children met in the bustee wore amulets and/or "kaiton" which were obtained from a fakir. When mothers were asked why such protection should be necessary after vaccination they replied that amulets and knotted thread guarded their children from other sorts of dangers which were associated with the jungle spirits of "bhut". As seen above, the latter are believed to be responsible for tetanus and symptoms which could be tuberculosis. But "bhut" and vaccines belong to two conceptual worlds which do not necessarily impinge on each other. Small babies wore a black spot on their forehead to prevent attacks from "bhut". Small necklaces sold by itinerant Bede women (a caste of gypsies who live in boats) containing various kinds of beads, seeds, pieces of wood, cowries, silver, coins, etc., are worn for the protective powers against the evil eye, against vomiting, against restlessness, against bad air and many other dangers. Amulets and protective necklaces are often offered by grandmothers or maternal uncles and young "modern" women who may vaccinate their children still keep the former because they come from "morobbi" (or elders) whose advice and teaching should not be ignored. The only women met whose children systematically did not wear the "kaiton" or the protective necklace were the wives of madrassa (Quranic school) teachers. Also at a clinic run by a Christian NGO, mothers were asked to take off the protective devices before the child was seen. Here mothers are forced to make a choice and are invited to put all their faith in one single system. Bustee women complained about this policy.

Of course, not all illnesses are seen as preventable. Some, like measles, are part of growing up. They come as a trial that a mother should successfully overcome by observing the appropriate rules. Measles is not seen as a preventable but as a curable disease. Tetanus is the opposite. It should be prevented by all means as it is incurable and deadly. Immunization against tetanus is desirable but for measles much less so.

4.2 Perception of Vaccination

"When a child has a vaccine followed by fever, it means that the medicine has circulated throughout its body. It has taken. But when the arm or the leg swells and aches, it means the vaccine got stuck there. It was not "digested" by the body. Sometimes puss gathers there and the skin starts rotting. "This is very bad." (Comments from a bustee mother.) Mothers who have had that kind of experience do not pursue with other vaccines considering that the intervention does not agree with their child. Substances do not mix properly. Note that in these circumstances no blame is addressed to the vaccinator whose method of work is not questioned.

In the VHSS study, men respondents appear to be more concerned than women about fever and other side effects following the administration of vaccines. Men voiced objections more often based on religious ground. They felt that vaccination was unduly interference with Allah's design and therefore considered the intervention un-Islamic. This is interesting. Judging from the literacy rate which was higher in that study than in our own, objection to vaccination on religious ground seems to be the fact of a better educated and, we may assume, economically more secure group. Among rickshaw pullers, small peddlers and other bustee dwellers, religious

objections have not been heard either from men or women. In that poorer class, fathers in any case do not seem to interfere much with their wives' decision to vaccinate a child as mentioned earlier.

In this section, an attempt has been made to grasp the understanding that poor, largely illiterate women have of immunization. As for curative care, it has been seen that vaccination is only one of a number of means to protect against childhood diseases. There is little comprehension that each of the vaccines has a separate action and after receiving three or four injections many mothers feel that their child has got some protection against common illnesses in general so they do not pursue. All injections are assumed to have a similar action, each additional one reinforcing the effect just like one multiplies the amulets around a child's neck to increase protection.

Even though mothers do not have a clear understanding of how a vaccine works inside the body, they still may be favorably disposed toward it. Vaccination clinics are associated with the prestige of allopathy. It is advertised by doctors and educated people who know. Upper class people bring their children for vaccination, so it must be good. The class encounter which takes place at the vaccination center between slum mothers and educated doctors may also be intimidating. One mother commented that the vaccinator shouted at her. He was arrogant and she felt humiliated. She did not return to complete the vaccination of that child nor did she for the baby who was born afterwards. Some mothers who do not return for the next shot on the given date do not return at a later date either because they fear to be admonished and humiliated.

Response to vaccination depends very much on people's experience with health staff. Once a relationship of trust has been established between providers and clients, understanding of immunization theory may not matter very much or at least is not the determinant factor. A mother whose older child was successfully treated at the New Life Centre when extremely ill has since complete trust in the teaching of that institution and got all of her younger children immunized. She does not have a clearer idea than others as to how a vaccine works inside the body but associates the intervention with the benefits she has received in the past.

5. EXPERIENCE WITH VACCINATION CENTERS

Mothers of vaccinated children were asked which clinic they attended and mothers of unvaccinated children whether they knew where the service existed. Six mothers out of eighty replied they had not heard about immunization or did not know where to get it. Another six replied that they knew where a vaccination site was located but it was too far. This last category of mothers were all from Tzorotghata and knew about the New Life Centre but not about two other clinics which were closer to their homes.

The distribution of vaccination centers is uneven and the range of MCH services offered by each of them vary greatly. The following ten centers were mentioned by respondents:

- five are NGO's : New Life Centre (NLC)
Children Nutrition Unit
World Vision
ICDDR,B
Bibir Musjid

- four are under the Ministry of Health: Azimpur Maternity
Hospital
Model Clinic
Rayer Bazar Staff
Colony Dispensary
Zigatola Staff
Colony Dispensary

- one is under the Dhaka Municipal Corporation: D.M.C.
Dispensary in
Hazaribagh

5.1 Vaccination centers run by NGO's

The best known and the most popular of all the immunization centers in the area of research is the New Life Centre, locally known as Bashbari Medical. Alone, it is responsible for more immunizations than all the other centers put together. The area where vaccination coverage is the highest is also the closest to Bashbari. Established in 1973, it provides a wide range of MCH services including:

- ante- and post-natal check ups
- examination and medicines for under-fives
- family planning
- day care center for malnourished children
- immunization six days a week
- teaching sessions about health and nutrition
- a good referral system

Usually, the first visit mothers make to the N.L.C. is not for immunization but for treating a sick child. Once there, they get advised about immunization. Some mothers who eventually immunized their child at the government dispensary first heard about immunization at this NGO and some ripple effect of their teaching over the last 15 years can be felt over the whole area.

New Life Centre immunization figures for 1988:

D.P.T. 1st dose:	2,312
2nd "	1,774
3rd "	1,461
Measles:	1,591

This result is achieved with limited resources. There is some outreach activity but only card mothers are followed up. The clinics are crowded and with the current resources, it is not possible to cope with an increased attendance. The New Life Centre cannot circumscribe their catchment area which is certainly very large. Many mothers who used to squat nearby and who visited the Centre have since been forced to move away but they still come to the clinic because of its familiarity.

It may be interesting to compare the above vaccination figures with those of Radda Barnen which has far superior resources and is covering Mirpur, i.e. a population of about a million. Radda Barnen is starting to do door to door coverage of bustees and they have employed 28 field workers to achieve this. As with the New Life Centre, Radda Barnen has been established for several years and is very well known in the Mirpur area. It is undoubtedly the most successful of all immunization centres in Dhaka.

Radda Barnen 1988 vaccination figures:

BCG: 15,854

D.P.T. 1st dose: 14,307
2nd dose: 12,204
3rd dose: 10,722

Measles: 8,1456

T.T. Pregnant women: 1st dose: 7,517
2nd dose: 6,518

Non-pregnant women 1st dose: 3,739
2nd dose: 2,419

Both Radda Barnen and the New Life Centre charge a fee for the immunization card. Poor women complained about the N.L.C.'s policy however. Mothers have to pay 10 takas to obtain a card on the first visit. Subsequent visits are Tk 5 and this entitles the child to immunization as well as free medicine, should there be a need for it. For a number of poor mothers this fee is a deterrent. They may pay this amount when a child is ill but not for immunizing a child who is well.

At ICDDR,B, which specializes in the treatment of diarrheal diseases, children may be hospitalized for brief periods and this opportunity is taken to immunize them. Our small sample suggests that mothers passively accept what is given without understanding what it involves and are not motivated to complete the course of immunization through their own efforts when the child goes back home. Such institution could perhaps spend more time in teaching mothers and explaining the benefits of immunization.

By contrast, mothers who had a child hospitalized at the Children Nutrition Unit did complete the course of immunization. Obviously more emphasis is given on teaching there and mothers are motivated to return even though the Nutrition Unit is a long way from their homes.

The Bangladesh Red Cross/Crescent has mobile clinics which have worked in 8 bustees so far. Once an area is delimited, the aim is to achieve universal coverage and then move on to a new site. The problem with this approach is that even though the public is provided with a good service for awhile, they are then deprived of it with no arrangement for its replacement.

One of the NGOs which reportedly provided immunization was on the ground of a mosque adjacent to a madrassa. Upon inquiry, it was learned that the service had stopped since the mosque committee chairman was no longer a doctor. The setting up of immunization at a mosque may not be the best site since women do not visit these places freely. Even the wives of madrassa teachers who lived on the compound were reluctant to go because they said they should not be seen by men. A male vaccinator in a clinic may be acceptable but the madrassa and the mosque are male space per se.

5.2 Vaccination Centres under the Ministry of Health

Of the four government centers listed above, the Zigatola Staff Colony Dispensary was the best known for the immunization of children among informants. Vaccination was started there three years ago. The service is given once a week for half a day by a vaccinator who comes from the EPI headquarters. A visit made on one vaccination day which may or may not be representative will now be described.

The first women arrived at the dispensary at 8 o'clock in the morning. The vaccinator came late and on his own by 9 o'clock. By 9:30 there were over eighty women with babies waiting. The vaccinator who was extremely busy entering names in two different registers and filling the vaccination cards received minimal help from the dispensary staff which is composed of two lady doctors, one pharmacist, a peon and an ayah. The pharmacist helped filling the cards and the ayah to boil the needles, but the doctors showed no interest whatsoever. Immunization had nothing to do with them. The senior lady doctor did not even know that the vaccinator came from EPI. She believed he came from ICDDR,B. By 10 o'clock vaccination had not begun yet. Mothers were getting impatient and babies even more so. It was extremely hot and people were fasting as it was Ramadan. The pharmacist fell asleep on his table. The senior lady doctor was bargaining the price of a sari with a burqa-clad woman peddler. She was not interested in talking about immunization. Rather she voiced her frustrations with her job and complained about the kind of medicine she practiced at the dispensary. She was totally unconcerned with the eighty mothers and crying babies in the next room.

The Staff Colony dispensaries operate as outpatient clinics for the P.G. Hospital. As far as I know the hospital itself does not provide vaccination and doctors have not been trained in EPI. They do not provide

family planning and do not hold ante-natal clinics either. The first cases are referred to the Model Clinic and the second to the Azimpur Maternity Hospital. There is a most traditional kind of curative medicine.

All the lady doctors who work at the dispensary during the day have private practices where they sit in the evenings. Some of them do give vaccines to private patients who are recruited during their day's work at the dispensary.

The EPI vaccinator seemed competent enough but on his own he could not very well manage the clinic. Mothers who arrived after 10 o'clock were turned away and one woman complained this was the third time it happened to her and said she would not come back. She lived quite a long distance away and with two little children it was difficult for her to arrive early. In theory, the clinic is opened till noon. Middle class women jumped the queue for ten takas. This was not done openly in front of me but I heard about it later. On that morning, 86 babies were vaccinated.

Considering the poor quality of the service it is impressive to see how many mothers came forward to vaccinate their children or be themselves vaccinated. For the success of EPI, it is imperative that something be done quickly to increase the number of staff involved in vaccination and improve their working conditions.

5.3 A Vaccination Center under Dhaka Municipal Corporation

The D.M.C. has 19 allopathic dispensaries and 4 for homeopathy. This is for a population of over 4 million people. The location of the dispensaries was determined during the British period and it seems that not much has changed since in the way they operate them. There is provision to recruit a doctor for each dispensary but the low salary offered (600 takas per month) does not attract them. The Hazaribagh dispensary I visited has been without a doctor for the last 6 years. The staff consists of one pharmacist who sees patients and dispenses medicines, two ayahs and one peon.

Once a week a team of three vaccinators come from the D.M.C. headquarters. For four days a week they work in different dispensaries. These vaccinators were competent and experienced. They participated in the smallpox eradication campaign and then received additional training in 1978 when the government launched its immunization programme. They have been working as vaccinators ever since.

The D.M.C. does not attract as many patients as it could. People know there is no doctor and the quality of the medicines is said to be poor. Perhaps for this reason, on the immunization day, attendance was less in Hazaribagh than in Zibatola although the service was better organized. The D.M.C. dispensaries are housed in old and badly kept buildings but they are well known. The greatest deterrent to a better attendance at the vaccination session may be the limited range and the mediocre quality of the other health services which does not inspire confidence. Needless to say, the quality of the relationship which has been established over the years between clinic health providers and clients is of paramount importance for the success of EPI.

6. CONCLUSION AND RECOMMENDATIONS

1. Judging from the women interviewed in this study, bustee mothers, over 80% of whom are illiterate, are physically relatively mobile. Most of them have held various jobs in the past and 35% still do in spite of the fact that they have small children below the age of three. These women appear to be better informed about the services offered in their area compared to women who are slightly better off economically but more constrained by *parda*.
2. Bustee mothers, on the whole, decide themselves whether or not to visit a clinic and immunize their children. Fathers are too busy earning a living and children's health is considered as the mother's concern. Among job holders and economically more secure families, fathers seem to take a greater interest in health intervention and some of them object to having their children vaccinated, arguing that should they become ill, they can afford to see a doctor and get food and medicine. Buying medicine and paying doctors fees is a matter of prestige, a consideration which motivates much of men's behavior.
3. There are few radios in the bustee. Moreover in many households switching the radio on (especially if there is no electricity) is a male prerogative. Most bustee mothers have not heard about immunization through radio or TV but from women neighbors, female relatives and staff from clinics where they occasionally visit. Needless to say, 86% of them being illiterate, written material does not reach them either.
4. Mothers' education bears a positive relationship with children's immunization but the years of residence in the city do not. Neighborhoods are important since bustees which are located near a good clinic that provides a wide range of MCH services also have a higher vaccination coverage.
5. Occupation can influence either way depending on the mothers attitude towards their jobs. Those who earn well (i.e., some garments factory workers) tend to get their children vaccinated and invest more in the general well-being. These women are family planning users and do not intend to have many children which would conflict with their work. Others who earn little and do humble jobs out of necessity rather than choice have little control over their lives and the children they have. They are burdened with too many responsibilities and do not have the time nor the energy to think about immunization which is not considered as essential.
6. Of the six diseases for which EPI is offering immunization, diphtheria, whooping cough and polio are ill-defined, symptoms are not easily identified and perceived causes are obscure or mysterious.

7. Measles, on the other hand, is a familiar disease which is generally attributed to Sitala the goddess of epidemics. Its treatment is well known and entails elaborate prescriptions. Mothers are the essential care takers and a child with measles should stay away from doctors while the rash is on. Mothers perceive measles as potentially dangerous but feel well equipped to deal with the disease. Caring for a child who has measles reenacts a powerful and valorizing role for women which health workers should not ignore.
8. The symptoms of tetanus as it affects neo-nates and parturients is well known. Traditionally, they are explained as spirit possession and it is only very recently that doctors' remedies (or vaccination) are beginning to be seen as potentially capable of combating the disease. This change is interesting and should be encouraged by demonstrating further the powerful effect of the vaccine.
9. Tuberculosis has been diagnosed by doctors for many years. It is seen as a frightful and deadly disease which is transmitted through blood and sexual intercourse (semen being conceptualized as distilled blood). The symptoms of TB in children are not readily identified which means that they tend to come very late to the doctor after trying fakir remedies.
10. Mothers vaccinate their children even though they cannot identify the individual diseases against which they are meant to gain protection and do not know how a vaccine works inside the body.
11. The perception of vaccination as beneficial has much to do with the prestige of allopathy which is also the medicine of the rich and educated and is patronized by the state. It depends on the relationship of trust which client-mothers have established with a particular institution and its staff over the past years.
12. But not knowing what action a vaccine has inside the body also provokes fears (such a big needle for a small child) and a negative attitude towards immunization. The prestige of allopathy does not suffice to attract women who feel belittled by health staff who are arrogant and condescending.
13. The vaccination campaign should present immunization as a package of six interventions which are generally beneficial to health and not insist much on individual diseases especially those which are not easily recognized or are not seen as desirable to avoid (i.e., measles). Tetanus, on the other hand, could be used as a focus with good demonstrable effects.
14. Among the women who are most difficult to reach are poor working mothers whose little children are very much at risk being deprived of breast milk for several hours a day and left without adequate substitute food. These children are often in a very poor state of health, and they are not vaccinated. Serious thought should be given as to how they could be reached. Providing a few outreach workers or adapting the hours of the clinic may be considered. Radio messages to gain the cooperation of employers (most of these women work as maid

servants) could be tried out. The formula adopted by the Ruban Volunteers Program whereby a volunteer mother is asked to recruit and help so many mothers per month to the vaccination center is interesting. Unless a special approach is devised, these children who are most in need will be missed.

15. In the urban dispensaries which are under the Ministry of Health, it is imperative that doctors be given training in EPI and be motivated to support the programme. The indifference which has been observed among some of them is confusing for the public and is highly detrimental to the aim pursued. Doctors should be an asset in this intervention and not an obstacle.
16. The clients of EPI are women with children. In Bangladesh, women always prefer to be served by women and an effort should be made to recruit female vaccinators. The vaccination center should be located somewhere where women feel free to go, for example not a mosque or a madrasa.
17. Where new vaccination centers need to be created, they should not be established as temporary establishments or as mobile clinics. Such a formula may be advantageous in areas where the population is sparse but this is certainly not the case for Dhaka. The permanency of a center allows the client-mothers to visit out of their own initiative and actively pursue the course of interventions.
18. The present drive for vaccinating all children under two should be used to promote a better integration of government MCH services in the municipal areas and this, not on an ad hoc, but on a permanent basis.

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