Social Demand for Immunization : Results from the Bhairab Study

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Perceptions about immunization: Results of the Bhairab study

This chapter reports results from the qualitative investigation in Bhairab. The investigation was carried out among 94 mothers representing various levels of immunisation status of the locality and their children. It focused mainly on mothers' perception and knowledge about vaccination and vaccine preventable diseases. It is assumed that an understanding of vaccination in the community is crucial to the sustainability of the immunisation programme. The results are organized under dominant themes that came out of the in-depth interviewing.

Knowledge of Vaccines

What vaccinations are for

All mothers in both urban and rural areas knew about vaccination. The level of knowledge, however, was better among mothers of immunised children than those of non-immunised children. The main sources of knowledge were the mass media, neighbours, relatives and friends, and health workers.

In the urban areas most of the mothers of fully immunised children (FIC) reported that they heard about vaccine from the health workers, doctors, *compounder*, relatives and neighbours. The mothers were told that vaccinations were given to protect children from diseases. Only a few mothers could specify the names of all six vaccine preventable diseases (VPDs). Mother of a FIC of Rishipatti said that she heard from health workers that injection was given for measles, TB, polio, diphtheria and whooping cough. Another mother of the same area mentioned that she learned from the health worker that *tika* was for cough, cold and *gota guti* (scabies), and women's tika was for tetanus. Another mother from *Kalikaprashad pur* said that she heard from the health worker and from her relatives that vaccination was provided to prevent measles. Mothers of majority of the partially immunised children (PIC) heard that *tika* was given for disease protection. They could not tell specifically the name of VPDs nor the appropriate vaccines. They received the

information from their neighbours and health workers. About the polio vaccine, a mother had learned from a TV advertisement that it was nutritious for children and that the child would not become crippled if vaccinated. She was also informed that no further injection was required after the child crossed five years of age. A mother of a PIC from Ramshangkarpur informed that she got the message from health workers that *tika* was provided for *basanta* (pox) and *phera* (measles). Another mother from the same area had heard from her neighbour that vaccination was provided during pregnancy to prevent any problem. Except one, mothers of all non-immunised children (NIC) reported that they had heard that vaccination was given for disease protection. They got the information from their elders, health workers, mass media and neighbours. Among them only a few could cite the names of vaccines. For example, a mother of a non-immunised child from Bhairabpur said that vaccination was given for TB, tetanus, polio and whooping cough and she had heard it from her neighbours. Another mother of this category from Rishipatti said that she learnt it from TV that *tika* was provided for polio. A mother from Kalikaprashad said that she heard that *tika* was a medicine. She explained that they got the following information from health workers: 'If you give your child medicine, the eyesight will improve.' The health worker probably had indicated the VAC (vitamin A capsule) to the mother.

In rural areas too, the mothers of fully immunised children learned that *tika* was given to the child to prevent diseases. Many of them specified the name of the diseases. For example, the mother of a FIC from Purbakanda said that *tika* was given for *Dhanustankar* (tetanus) and *daira laga* (polio). However, many of the mothers of FIC in the rural area could not specify the name of all six VPDs. These mothers got the information mainly from their neighbours, health workers/vaccinators and mass media. One mother from Purbakanda told that she got the information from her school when she was a student. She said, '*I was in Class VI and I had joined in a rally for tika. We were told that the way umbrella saves us from the rain, the same way tika can save the children's lives.*' She further said, '*We also learned about the vaccination in the school. I can remember six dangerous diseases for which tika is given.*' Another mother of a FIC from Kalikaprashad said that a doctor advised her to give tika to her child. The doctor also told her that it was good for the child's health and it would prevent different diseases. Some mothers also reported that they had heard from their elders about tika and sometimes they

followed their elder sister in taking the TT vaccine. The mothers of PIC heard two kinds of information about vaccination. One, tika was for the protection from various diseases, and two, after receiving the tika the child would get less diseases and even if the child had the diseases, the suffering would be much less. All mothers of non-immunised children (NIC) from Purbakanda and Bashgari said that they did not get any information about vaccination. Among the other mothers of this category, a mother from Atkapara said that she heard the name of the disease *dipthe* (diphtheria) over the radio but did not know exactly what it was. Another mother from the same area said that she heard from the health worker that immunisation was good and that it was a protection against diseases. The remaining mothers of NIC from Kalikaprashad reported that they had heard of vaccination from the health workers and over the radio. They learnt that vaccination was good for the baby and it saved babies from six diseases.

Vaccination Schedule

While the mothers described the vaccination schedule they also talked about the doses that their children received and the age limit within which the vaccination needed to be completed. In the urban areas, it appeared that the mothers had some idea about TT vaccine schedule but not about that of the vaccinations for children. For example, a mother of a FIC from Bhairabpur said, '*the child has to start getting vaccination after one month of age, and at the ninth month she can have measles vaccine.*' The mothers of PIC could tell the starting time of vaccination of children quite accurately but not the time by which immunisation needs to be completed. Some mentioned one year and some others five years as the age limit. The mothers of NIC in most cases also could not specify the age limit for receiving vaccination.

The mothers in the rural areas could not speak specifically about the vaccination schedule of the children. They could describe the age limit of the child for receiving vaccination. The mother of a PIC from Purbakanda said, '*Tika is given to the infants and it is given within one year. The drop (polio) is given to the child up to five years.*' Sometimes the mothers were found to count the number of their visits to the vaccination centre while answering about the vaccination schedule. One mother of FIC from Purbakanda said that child vaccine starts from one and half month of age and it continues up to one year. One should go for tika 4 to 5 times at one month interval. Some

mothers of partially immunised children only mentioned the number of vaccination in this regard and sometimes they were not sure about the starting time of vaccination of the child. For example, the mother of a PIC in Kalikaprashad said, '*Tikas are five in number. It starts after reaching six months of age. After five years, vaccinations are not given.*' The mothers of NIC in the rural area only talked about the age limit of the child for vaccination. About the starting time, some mothers mentioned one month or one and a half month and others mentioned three months. Different views prevailed about the upper age limit, but a number of mothers thought that it could be given up to one year. Among the remaining mothers, some mentioned two years, while others mentioned five years. One mother from Atkapara said that the vaccines could be given from three months to six years of age.

Why vaccines are effective

Most of the mothers did not have a clear idea about how the vaccines worked in the body. Some, however, had their own specific views. In the urban area most of the mothers of FIC described vaccines as a protector against diseases. They had faith on it even without understanding how it worked. One mother of a FIC in Bhairabpur said, '*I do not understand how vaccines work in the body, but I believe that if one is vaccinated illness cannot attack him.*' Another mother from Rishipatti said, '*Tika makes the body clean, but I am not sure how it does it.*' The mother of a FIC in Ramshangkarpur said, '*Tika works for whole day and when fever comes at night I feel that it works.*' Again another mother of this category from Rishipatti mentioned, '*When tika leaves a scar it means it is working well.*' In the view of a mother of a FIC in Bhairabpur, tika worked for five years. Another mother of the same category from Kalikaprashad said, '*From my own experience, I can tell you that it works for twelve to thirteen years. There is another injection for older people and that is provided by government and distributed by family planning workers.*'

Shifting now to the rural context, answering the question on how tika worked in the body, the mother of a FIC from Atkapara said, '*Tika is like medicine. Tika works the same way the medicine works in the body. The difference is, medicine is given after the disease appears and tika is given before the disease happens.*' She continued, '*I heard that it works for the rest of the life.*' Another mother of a FIC of Purbakanda clarified the matter from a different point of view.

She said, '*I do not know how tika works in the body. What I know is that it makes the body so hot that diseases cannot touch the body. It prevents six diseases.*' Some of the mothers with partially immunised children clarified the idea from a functional point of view: '*After entering into the body it expels all the diseases, but I cannot tell the process.*' Another mother from Bashgari stated, '*Tika is like an armor for the whole life that works against diseases.*' In a similar fashion another mother of similar category from Kalikaprashad told how the vaccine worked after entering into the body:

> After the children receive tika the place swelled and pus flowed from it. Along with the pus all 'dirt and bad things of the body' (*sariler maila*) come out. So no disease can attack the baby in future. If there is no swelling with pus then one has to understand that the vaccine did not work properly in the body.

Other mothers of partially immunised children also related the effectiveness of vaccination to side-effects. One mother from Bashgari said, '*Temperature rises after taking vaccine and the arm becomes infected. After a few days it gets well.*' Nearly all mothers of non-immunised children recognized vaccination as a treatment that cures diseases. Another mother of a NIC of Atkapara believed that vaccination reduced the intensity of the disease. The remaining mothers did not have any knowledge about it and thought that the doctors might tell it better.

The beneficial effects of vaccination

Vaccination protects against all diseases

In most cases, mothers thought that the vaccination was good because it protected their children from diseases. Some mothers believed that vaccination ensured good health for their children. A mother from urban Bhairabpur said, '*Tika is useful because after vaccination no disease can attack the child.*' Some of the mothers also said that, as tika protected the child from diseases, so after receiving the child remains in good health. For example, one mother of Rishipatti said, 'Vaccination has side-effects. It is good for the health of the children. The *Suashya Karmi* (health worker) *told me that since we are poor we are not able to buy medicines, so we should take tika from him. Tika was given for cough, cold and tetanus.*' Some mothers had their beliefs

influenced by others. One mother of Bhairabpur said, '*I have heard from TV and radio and from the other women living around my house that it is good to take injection.*' The mothers of non-vaccinated children also felt that tika was good for a child's health. Some of them made a link between tika and illnesses and thought that it would be good for her child without mentioning why their own children were not vaccinated.

In the rural areas too, mothers irrespective of the vaccination status of their children believed that vaccinations were given for the good of the children. The general notion was that '*vaccination is good for the child.*' Poorer mothers' views appeared to have been influenced by the opinion and behaviour of the socio-economically better off in the society. One mother said, '*We are illiterate. The educated people say that tika is good for health. I also think it is good because the child will not get ill.*'

The mothers' perception of vaccination as protection against diseases was explored further in the study. A number of concepts came out in relation to protection. It was noted that the mothers perceived that different vaccines provided protection against different diseases without being sure about the diseases or the vaccines. In the urban context most of the mothers with FIC believed that each vaccine had a different purpose and that a specific disease needed a particular vaccine. They believed that a single tika was not enough to protect from all diseases. Mother of a FIC from Ramshangkarpur said, '*One tika cannot protect from all diseases. I had all the tika given to my child but now she always suffers from common cold and cough.*' Another mother informed, '*I have received ATS injection and I believe it will work against all diseases. My child had three injections and one of them was for Jaksa (TB).*' Among the mothers with PIC, only one mother believed that one particular vaccine was for one disease. In this respect, another mother of the same category said, '*If one (tika) was enough the doctor would push one. So what is the purpose of pushing three different types of vaccines*?' The remaining mothers did not give any opinion because they never thought about this. One mother from Bhairabpur said, '*How can I tell how many tikas needed for how many diseases. I went to receive tika by just following others.*'

Mothers of nearly all FIC in rural areas believed that one tika was given for one disease. On this point a mother said, '*All tikas are important. If it was not the case, there would not have been so many vaccines.*' Few mothers mixed up the vaccination that they received during pregnancy with their children's vaccine. Interestingly, one mother of Purbakanda said, '*If one takes three BCG and DPT doses during pregnancy then the diseases will never occur.*'

Most mothers of PIC in rural areas could not remember the names of the diseases for which tikas were given, although many of them did say that there were specific tikas for specific diseases. Others did not have any idea about this. One mother said, '*I do not have any idea about the number of vaccines. I just follow the instruction of the health worker. Three doses were given and those doses were not given at a time.*' Another mother of this category from Atkapara said that tika was given for asthma and other twelve diseases. The mothers of NIC in the rural areas did not have much knowledge about it. Nevertheless, one mother of this category said, '*Vaccination is for all the diseases and since my child does not suffer from any disease why should I give tika to my child?*'

Whether a vaccinated child does still need other modes of prevention

As regard to the role of preventive measures other than vaccination, mothers mostly believed that only vaccination was not enough and that other measures were needed to protect children from various illnesses. We provide some general views on this subject and discuss responses on each VPD separately. Mothers of most FIC in the urban area mentioned tika as the only measure of prevention. A few of them had identified other measures of prevention. One mother of this category said, '*We should maintain some discipline. We should not take food from others as because food is the main source of disease.*' Mothers of a few PIC considered vaccination to be the sole preventive measure. In this regard one mother from Ramshangkarpur said, '*We take vaccination when the child is in the womb and we also get them vaccinated after delivery. If the vaccination is given to the child in the neonatal stage then the diseases cannot do any major*

harm to the child.' Another of them said, '*Before diseases enter the body tika is given.*' The mothers of this category also pointed out some other measures to prevent the VPDs. During discussion, one mother from Rishipatti stressed the treatment of the diseases rather than prevention. She said, '*We do not do anything, we go to the doctors.*' The mothers of NIC in the urban area mentioned that injections were taken to keep the child safe from the VPDs. Some of them perceived that the Polio drop would protect their children from all diseases. For example, a mother of Bhairabpur said, '*I took injection while I was pregnant and I also gave the drop (Polio) to my child.*' Only one mother of a NIC said that she took *tabiz* (amulet) for preventing these particular illnesses.

Many mothers of PIC and NIC, however, believed that it was only God who could save children from VPDs.

About prevention of VPDs

Mothers described various preventive measures for VPDs other than vaccination that are described for each VPD separately.

Polio: The mothers of fully immunised children in the urban area except Ramshangkarpur mentioned vaccination as a prevention for polio. One mother of this category from Bhairabpur had a slightly different version; she thought that '*since polio comes from measles the tika for measles will protect against polio.*' In this regard the notion of the mothers of Ramshangkarpur was distinct from other urban areas. One mother said, '*since crossing a rope is the cause of ardhangga (polio), we just take care and avoid crossing any rope.*' The other mothers believed that as polio happened due to Karap Batas (bad wind) or Kalikaprashad (evil wind) so one should not go outside in the evening or at midnight. The mothers of FIC of said, '*To prevent polio we do not take any food during lunar and solar eclipse and we do not walk or run during the eclipse. We just lay straight during eclipse.*' The mothers of PIC of only Bhairabpur mentioned vaccination as the mode of prevention of polio. The remaining mothers of this category provided other answers. Some mothers of Ramshangkarpur admitted that they did not know anything and

that the *Kabiraj* (folk herbalist) knew about the prevention. Almost all mothers of NIC said that they did not know about the prevention of polio. Another mother said, '*No preventive measure is taken against polio. Treatment is given after the disease occurs.*' Only one NIC's mother of Bhairabpur admitted that she heard of vaccine as a prevention for polio.

In the rural areas, only one mother of FIC from Bashgari mentioned the 'polio drop' as preventive measure for polio. Among the remaining mothers the majority talked about maintaining certain restrictions as polio is contracted due to touch of a type of evil wind. A few mothers mentioned *tabiz* (amulet) as a measure for prevention. The idea of burning rope and maintaining restrictions were also common among the mothers of PIC in rural areas. Nevertheless , a mother said, '*We cannot see the ardhangga batas (paralyzing wind); so we can do nothing to protect from it.*' Another mother of this category in Kalikaprashad had a different opinion. She said, *Mala* and *dhela (a kind of small fish) and green leafy vegetables should be given to the children to protect from the disease. Because these types of foods will fulfill the vitamin deficiency that is the cause of polio.*' A few mothers of PIC in the rural areas had heard about vaccination as a preventive means. A mother said, '*Something is done by the government, and two days ago children under five years of age were given injection for it.*' None of the rural mothers of NIC identified vaccination as a preventive measure for polio. Rather, most of them stressed on maintaining restrictions to prevent the diseases. As one such mother said,

> To avoid *kharap Batas* (bad wind) we do not bring out the baby in the evening. Besides, one should be careful at the time of passing through bamboo grove during mid-day. One also should avoid urinating and defaecating at mid-day in an open field or in a bamboo grove.

The rest of the mothers of NIC had no views on the subject of polio prevention.

Measles: In the urban environment a small number of mothers of FIC mentioned vaccination as a preventive measure against measles. Some mothers were confused on the polio drop and said that this was fed for preventing *phera* (measles). The remaining mothers said that they did not do anything to protect their children from measles. The mothers of the PIC gave diverse opinion

about preventing measles. They considered that since measles was a disease to be dealt with by the *Kabiraj*, so he knew about its prevention. Some mothers also considered 'injection' during pregnancy as a means to prevent measles. The mother of a PIC from Rishipatti believed that regular worship of goddess *Kali* was a way of protection from the disease. While another mother from the same area said, '*Now-a-days we hear that tika may prevent such type of disease.*' It was found in the study that most of the mothers of non-immunised children did not have any idea about measles prevention. One mother said confidently, '*No measure is available to prevent this disease.*'

The situation was somewhat different in the rural areas. Except in Purbakanda all of the mothers of FIC in other villages stated that they knew about vaccination as a preventive measure for measles. The mothers from Purbakanda stated that they did not have any knowledge about the prevention. Some of the mothers with PIC mentioned other ways of prevention. They said, '*To protect the child from phera (measles) she should not be taken out of the room but be kept inside.*' Some mothers also had different opinions. One mother of Atkapara said, '*Allah can protect from the disease and the doctor can treat.*' The opinion of the mothers of NIC varied. Many of them said that they did not know anything about prevention and one of them specifically said that there was no vaccination for *phera*. Another mother of a non-immunised child said, '*Phera usually comes in the form of outbreak. No effective measure can be taken to prevent the disease.*' One mother of a non-immunised child of Atkapara said:

> Some mothers take amulet (from the *kabiraj*) for it. They follow certain restrictions to protect their children from measles. If the child is brought out of the house the whole body of the child except mouth should be covered.

Tetanus: In case of tetanus, vaccination as a preventive measure was found to be very familiar to the rural mothers of fully immunised children. The majority of them referred to vaccination that was taken during pregnancy. One mother of a FIC from Bashgari said, '*During pregnancy if someone takes government's injection then tetanus will not occur, but I have not heard of any such injection for children.*' *Mother of a FIC described other ways of prevention. She said,*

> Sometimes people receive *tabiz* from *kabiraj* and hang it by the neck of newborn baby. Sometimes the mothers mark one side of the newborn's forehead with black carbon collected from bottom of the cooking pot so that the *thakur* (an overlord) cannot throw an evil eye on the child.

The mothers of PIC also knew about the injection for adults but not for their children. A different view was given by a mother in Kalikaprashad. She said,

> To avoid tetanus some restrictions must be observed in the confinement room. First of all, the room must be kept clean with doors and windows closed. The door is allowed to be opened as less frequently as possible. The restrictions have to be maintained for at least twenty-five days after birth. For twenty to twenty-five days the *thakur* always looks for an opportunity to grab the baby. After that period, the baby gets a bit of maturity and the *thakur* goes away.

The mothers of NIC in rural areas did not appear to know much about vaccination of children as a means to prevent tetanus. Yet one mother of this category from Atkapara said, '*If one gets ATS injection after getting a cut on the body, he will not be attacked by tetanus.*' Some mothers of NIC also mentioned about restrictions in the confinement room to prevent the newborn from getting the tetanus. They said that otherwise, the *thakur* would enter into the confinement room in the guise of a human. According to them, up to a certain period there ought to be fire in a mud pot in the confinement room. Those who wish to enter into the room can do so by making himself/herself warm. By that process the *thakur* could be kept away. Through this method the newborn could be protected from tetanus.

In the urban areas, most of the mothers of FIC, except those in Ramshangkarpur, mentioned injection (tika) as a preventive measure. They too were confused about vaccinating pregnant women vis-à-vis the children. They talked about the injection that they had during their pregnancy. Other mothers of FIC also talked about maintaining some particular restrictions to prevent tetanus. A few mothers mentioned *tabiz* (amulet) during pregnancy as a measure of preventing the disease. With respect to the vaccination as an effective means of tetanus prevention, the mother of a FIC

from Ramshangkarpur had doubts. She said, '*For preventing tetanus they (other women) take injection but even that does not bring good result.*' All the mothers of PIC in Bhairabpur spoke of injection for prevention. The mother of a PIC of the same area said, *I think if pregnant women take injection during pregnancy, tetanus will not attack the child.*' The mothers of this category from Rishipatti mentioned two other ways of prevention for *dhanustankar* (tetanus). Some stressed on maintaining certain rules to avoid contact with the evil wind. Another talked about observing some restrictions during solar and lunar eclipses. Among all the mothers of NIC in the urban area, only one mentioned about vaccination for preventing tetanus. Some of them identified amulets as a mode of prevention and the remaining mothers spoke of certain restrictions in movement in daily life.

TB (Tuberculosis): The mothers of FIC in the urban areas mentioned several measures for preventing TB. One of them said,

> TB is a kind of *choya laga* (contagious). If anybody steps over spittle and coughs then s/he will contract TB. TB may also occur if someone takes meal with a patient from the same plate. It may also be contracted if one sits face to face with a TB patient, as the disease spreads with breathing. So one should be aware about these matters to prevent TB.

Another FIC mother from the same area said, '*Now-a-days there is injection to prevent the disease.*' The mothers talked about vaccination in general but it appeared that perhaps many of them did not know about difference between vaccines. One mother from Kalikaprashad said, '*I received ATS injection that will protect me from jaksa (TB).*' The mothers of PIC from the urban areas also referred to different ways of TB prevention. One mother of Bhairabpur said, '*Plate and glasses of the patient should be isolated. Besides we should not eat that type of food which does not suit us. For example, we should not eat cold food.*' Another mother of PIC from Ramshangkarpur said, '*Warm water should be used to take a bath to protect against the disease.*' A few mothers of PIC mentioned the vaccine as well, but they could not identify it specifically. For example, a mother from Ramshangkarpur said, '*The doctor told us that if we take injection the child will not have jaksa rog. So if the mothers take injection the child will not get*

dhanustankar (tetanus) and jaksa rog.' Some of the remaining mothers said that they did not know about prevention but they thought that smoking should be avoided. Mother of a NIC of Ramshangkarpur drew a link between TB and cleanliness: '*We should take bath early in the morning. The mother should wash herself when she finishes her breakfast so that the child will not get any cold.*'

In the rural environment, the mothers of FIC mentioned vaccination and observance of certain restrictions for TB prevention. The mothers of PIC mentioned some measures for prevention of TB: vaccination, observance of restrictions and food taboos. The following words came from a mother of Atkapara, '*Because of smoking Jaksa (TB) attacks. A doctor in Manikdi advised me not to smoke.*' Again another mother of Kalikaprashad mentioned about TB's link with malnutrition. She said, '*Doctor says those who eat egg regularly do not get TB, but I think a person who takes egg daily may sometimes get TB as well.*' Another mother of the same area expressed a different opinion. She thought that TB spread if the people allowed their children to roll on the mud and spit here and there. According to them they should keep their place neat and clean and always cover the food so that the flies could not contaminate it. Nearly all mothers of NIC were unaware about the modern ways of prevention of TB. Only one mother in this category from Kalikaprashad mentioned that there was a vaccine to prevent the disease. She connected the disease with asthma and said, '*the hadani (asthma) matures in course of time and transforms into TB.*' She further added, '*At infancy, asthma may be suppressed for a while because of medicine but it cannot be healed completely. I have been told that if the injection is taken then TB can be prevented.*

<u>On harmful effects of vaccination</u>

Although the majority of the mothers in rural and urban areas did not consider vaccination harmful for their children, there were cases which reflected that the mothers sometimes perceive vaccination as harmful. Many mothers of both rural and urban areas reported about the side-effects of vaccination, such as fever, swelling, pain and scar. Yet most of the mothers did not complain about these side-effects. Rather they said that all these side-effects related disorders healed automatically. The health worker gave a clarification to the mothers about the so-called

side-effects and said that those were the indications of tika (vaccine) working on the body. Some mothers were unhappy with such side-effects, for which their children suffered and medication was needed to cure them. It was found that due to this suffering some mothers of partially immunised child did not continue the vaccination for their children. In this regard a rural mother narrated her story. She went to have her child vaccinated because she heard that vaccination prevent diseases but after vaccination the opposite had happened. The child had fever and terrible pain. Another mother of a partially immunised child of Purbakanda said, *'My child got high fever and his leg became swollen. It remained in that situation for many days. The child cried loudly and did not allow anybody to touch the leg. My husband yelled at me and said that if the child gets the disease, then what is the use of receiving tika*?' Some mothers with NIC were also very much unwilling to provide vaccination to their children because they thought vaccination would harm their children. For example, the mother of a NIC in Kalikaprashad said, '*My elder child got fever after vaccination so I did not provide tika to my younger child.*'

In the urban areas the mother of a NIC from Ramshangkarpur refused to provide vaccination to her child. She stated, '*My child will die of the vaccination, because I heard one gets bara jvar high temperature after getting vaccination. My child has amasa (dysentery) as well.*'

In Kalikaprashad the mother of a non-immunised child had seen that after receiving vaccination the child of her neighbour had died. So she was not ready to receive tika for her own child. She narrated the story : '*After receiving an injection the healthy child of Dhanu Mia died. The injection was given in the thigh and the baby had pain. Later an abscess appeared there. Eventually the thigh got 'rotten'. After a month the child died.*' Another child had only pain and pus on the thigh after vaccination. The mother of that child was not willing to provide vaccination to her younger child. The members of the village organisation of which she herself was a member tried to convince her but she was still not comfortable.

However, in the case of FIC it appeared that though certain mothers embraced much trouble because of side-effects they still continued vaccination of their children. Such a mother from Kalikaprashad narrated her experience regarding side-effects: '*My child got vaccination in the*

thigh. Reactions began after three days with severe fever and the baby suffered a lot. I discussed this with a compounder (a local unqualified medical practitioner) *and bought a syrup for my baby at his advice. Afterwards the child gradually got well.*' In spite of this incident she continued to provide vaccination to her child. Again another mother of a FIC from Purbakanda gave a statement on this issue and said : '*Fever that occurs after vaccination does not require any medicine. It heals up eventually. Those who do not know rush to the doctors. Some babies have swollen thigh after vaccination. The place of injection becomes red and swollen. It can happen due to unclean needle or if the baby rolls on the mud after getting injection.*' She further added, '*I take good care of my baby and always carry my child on my lap.*'

There were other important and interesting examples. The mother of a FIC from Atkapara said that she heard from people that receiving an injection was harmful for the child. The baby might become sterile in the future and would not be able to produce offspring. Still she vaccinated her child because her mother-in-law advised her to do so. Another mother of a PIC of the same area reported that initially she was afraid of injection as a baby of the same locality had his leg amputed as a consequence of receiving the tika. She consulted with doctors and people in the area who convinced her that tika was not harmful at all. Her husband also said that those who pushed injection were all 'qualified doctors' and they could not do something which paralysed the child.

On the severity of VPDs

The urban mothers from all categories said TB creates the most serious condition among all vaccine preventable diseases. They clarified that in this condition the affected person coughed a lot and blood comes out with the cough and doctors have to be consulted for treatment. According to them the illness was very hard to cure and ultimately the patient might die. After TB, they pointed out polio as a severe condition for children. They mentioned the disease as non-curable and life threatening as well. Measles was another disease that was much dreadedful. Several mothers considered tetanus as life threatening.

Most of the mothers in the rural areas considered all of the six vaccines preventable diseases as severe in the sense that all could be life threatening for children. Some mothers ranked only polio

and TB in this category. The factors associated with for such a consideration were more or less identical with that of the urban mothers, except the point that due to polio the child could become disabled forever. One mother from Kalikaprashad labelled whooping cough as dangerous in the sense that '*the child suffers from extreme cough, having breathing difficulty and may die from it.*'

Many mothers in both urban and rural areas of all categories also considered diarrhoea and asthma as vaccine preventable. Their point for *hadani* (asthma) was that it was very hard to cure, and caused trouble to the child and finally it might turn into TB. Because of diarrhoea, one mother said, '*the child becomes rapidly weak and her health deteriorates. The disease could be life threatening if proper treatment is not provided in time.*'

Whooping cough: For the prevention of whooping cough the mothers of FIC in urban areas mentioned vaccination and observance of certain restrictions. They said that the baby's mother should be careful about cold and she should not get in touch with cold water. However, a mother of a PIC from Ramshangkarpur said that there were medicines and injections for preventing the illness. The level of knowledge among the mothers of NIC about the prevention of whooping cough was low. None of the mothers of such children had any clear view with the exception of one. The latter suggested that the mothers should not allow their children to move on the ground and avoid contact with water.

Diphtheria: Most of the mothers of FIC in urban areas mentioned tika as a preventive measure for diphtheria. However, one mother from Ramshangkarpur thought that the illness could occur without any notice and it was from God. The mothers of PIC did not say much about prevention. One mother of Bhairabpur believed that there was no measure available to prevent the illness. However, another mother of this category described a different way of prevention. She said that the illness could be prevented by putting the blood of umbilical cord to the mouth of the baby. She also mentioned that both of her children were given this particular blood. The mothers of NIC were not much knowledgeable about the prevention of the illness. Only one mother of Bhairabpur said that she had been told that five illnesses including diphtheria could be protected by vaccination.

Mothers in the rural areas admitted that they did not have much knowledge about the prevention of diphtheria.

On causes of VPDs

Considerable variation in views of mothers, about causes of the six vaccine preventable diseases (VPDs) were observed in the study area. While describing the causes of the diseases, the mothers referred to different folk names and identified various symptoms. Sometimes the symptoms of the diseases were manifested in the terminology or were related to the cause.

Measles: Measles was the condition that was almost commonly known to all mothers of rural and urban areas. Measles was referred to as *phera*, *ham*, *lunti*, and *raksa* in different places. Among them, *phera* was the most commonly cited terminology.

Both the rural and urban mothers held similar beliefs about the signs and symptoms of *phera*. In the rural area, the mother of a FIC from Purbakanda said, '*Phera is experienced by almost all children. If children are attacked by the illness, fever and cough occur, small rashes as prickly heat appears all over the body and there is burning sensation inside the body. Primarily, the rash appears in red colour but turns into black when they become dry.*'

Most of the rural mothers considered chicken pox and measles as similar type of illness having identical causes. One rural mother of a PIC explained, '*Temperature of the body rises for fever and granules appear. If the size of the granules is big then we call it painna gota* (chicken pox) *and if they are small like rashes we call it phera* (measles).' Some of the urban mothers residing in Ramshangkarpur also believed in this type of classification. However, the mother of a partially immunised child of Atkapara mentioned about *bhaisa phera* (buffalo measles) which occurs when the rashes are dense and grow big in size.

Most of the mothers in rural areas admitted that they did not know the causes of measles. Yet in the opinion of some women a type of 'evil wind' (*Ku Batas/alga batas*) was responsible for the disease. The mother of a NIC of Purbakanda clarified the situation, '*Children get phera from the*

touch of evil wind. I heard that in 'hainja bela' (early evening) that type of batas (wind) *blows. Since it is like normal wind, we cannot differentiate between the evil and the normal winds. If evil wind touches the body of the child he/she would get phera.'* She further said, '*If we can identify the wind we can also avoid the illness.*' Another mother of a NIC of Bashgari added seasonality to this evil wind concept. She believed that *phera* happened due to evil wind but the disease occurred more during the month of *Caitra* (spring, March-April).

Certain mothers of FIC and PIC considered the disease contagious. Two mothers, one of a FIC and another of NIC, pointed out that fever was likely to be the cause of measles as because fever comes first and is followed by measles. The mother of a NIC of Bashgari said, '*Allah has given the illness.*' Yet another from the same category and area had a different reason. She said,

> The body temperature of measles-affected children are usually higher than normal. If the mother of a child eats fish and meat in a big quantity, the breastmilk becomes thick and heavy. When the baby sucks breast milk, his/her body temperature gets higher and it becomes difficult for the baby to digest the milk. *Phera* is an outcome of all these.

In urban areas, the mothers of fully immunised children had very little knowledge about the exact causes of measles. One mother said, '*It happens athka* (suddenly) *to the child.*' Mothers of partially immunised and non-immunised children also expressed a general ignorance on the causes. Interestingly, one Hindu mother with a PIC thought that non-performance of '*Kali puja*' (a religious rite) could also be a reason for the disease. On the other hand, the mother of a NIC mentioned the disease as '*mayer doa*' meaning blessings from 'mother' meaning goddess. Here she referred to the goddess '*Sitala*' and said, '*Sitala appears on the skin and the patient loses her/his sense. It can appear even during pregnancy.*'

Polio: Polio was well known to the mothers, most probably because of NID. It was locally known as *daira laga, ardhangga batas, aijangi batas, lula* and *lula batas*. The name 'polio' did not surface as a local terminology, but when the mothers were talking about NID they mentioned the 'polio drop'. *Ardhangga batas*, which was most frequently used to refer polio in both rural and

urban areas, was also considered as the cause of the disease. The mothers elaborated that if a type of evil wind comes in contact with a person's body, the part of the body becomes paralyzed. The evil wind was called '*ardhangga batas*' (paralysing wind) and because of that the disease 'polio' is known as such. *Aijangi batas* or *aguni batas* was identified as the same type of evil wind that was also thought to be responsible for polio. Regarding *daira laga*, the mothers provided a dual interpretation. The term *daira laga* was probably transformed from the word *dari* (rope). Some mothers mentioned that if attacked by this illness the hands and legs of the child became dry and thin day by day like a rope. The mother of a NIC had another explanation, '*We call daira laga because the child gets this illness if his/her mother crosses rope during pregnancy.*' The other term *lula* means *paralysed* and *lula batas* is the evil wind that makes a person paralysed.

Regarding the symptoms the mother of a PIC said, '*The hands and legs become lean and thin (hat-pao gulan cikan haye jay), body loses strength and the affected parts become inactive (acal).*' Other mothers of NIC were not familiar with the signs and symptoms of the illness. Majority of the mothers of FIC of urban areas associated polio with continuous fever. The mothers of neither PIC nor NIC made such an association. They noted the other symptoms of polio by referring to disability, or numbness of hands and legs. Often the mothers of rural areas mixed up the symptoms of polio with paralysis of the adults.

A completely different explanation was given by a mother of a PIC of Kalikaprashad. She said, '*Iodix, a type of vitamin, is the cause of polio disease. If there is 'iodix' deficiency in the body the child may get polio.*' Probably this woman was referring to the causes of goitre that results from iodine deficiency.

One woman referred to *ham* (measles) as the cause of polio. She drew a relationship between measles and polio and thought that polio resulted from measles. Another mother said, '*Ardhangga (polio) occurs from jvar (fever). If a child suffers from fever, polio may attack the child at night.*' In course of the conversation she further added, '*These days the illness affects the mothers as well.*'

Tetanus: Tetanus, another commonly recognized illness, is termed locally as *dhanustankar*, *thakur dhara/thaura* and *alga dos*. Mothers of all categories from the rural and urban areas were familiar with the signs of tetanus. Often they linked the disease to women, especially pregnant women. In case of adult women they termed the disease as *dhanustankar*. The mother of a FIC in rural area described the condition in the following way: '*The patient bites her tongue strongly and constantly. Her body colour changes and convulsion occurs frequently. The body curves into many directions.*' 'Stuck jaw' was another symptom that was also mentioned by the mothers of FIC from the rural areas. Neonatal tetanus was found to be termed as *thakur dhara* or *thaura* in both rural and urban areas. One mother of a NIC from urban area stated, '*thaura occurs to the young child and the child refuses to suck breastmilk at that time. But dhanustankar is the illness for adults and it occurs to the mothers during delivery.*' According to the informants, *thakur* was an evil entity that usually attacked the young child in the confinement room and the meaning of *thaura* or *thakur dhara* was a condition created by *thakur* (evil entity). A clarification was put forward by the mother of a FIC:

> *Dhanustankar* and *thakur dhara* are different kind of illnesses. *Dhanustankar* develops from cuts and wounds. If a *abudda's* (child's) mother goes close to the pond or a ditch and is caught by the evil entity, then her child will get *thakur dhara*. The child becomes red and blue when caught by *thaura* but with *dhanustankar* they do not turn into red and blue. Rather he/she (child) throws the legs and hands violently and bites tongue with the teeth.

The mother of a non-immunised child from Atkapara, however, thought that both *dhanustangkar* and *thakur dhara* were the same conditions. She said, '*The mothers of olden days could not identify dhanustankar, it was thakur dhara to them. Along with the baby many mothers used to die in the early days when they could not identify dhanustankar. Now-a-days it is curable.*'

Alga dos was another terminology for tetanus in the area. The people called it '*alga dos*' because the young child gets it from *ku dristi* (evil eye). The mother of a PIC from Bhairabpur South cited her own son's example in this regard: '*My son had Ku dristi on the fifth day after birth. He*

screamed throughout the night and I could not give him breastmilk. He not only had convulsion but also turned into blue, black, yellow and red. He was taken to the village healer and by the grace of Allah his condition improved in two days.' Some mothers were familiar with the term 'tetanus' as well; The mother of a PIC explained, '*We call it dhanustankar but the doctors call it tetanus.*' According to a mother, tetanus could happen due to defective cutting of umbilical cord of the newborn. Failure to receive the TT was also mentioned as a cause of the disease. For example, the mother of a FIC from Rishipatti mentioned that she did not receive the ATS injection during her third pregnancy, and consequently she had tetanus at the time of delivery. The contagious nature of the disease was also mentioned: '*In case of tetanus we should not touch the sick person. While my mother was dying I was pregnant but I had to nurse her. As a result my child had dhanustankar.*'

The mother of another FIC had another explanation: '*If a mother gives breastmilk to her baby just after birth then her child may be attacked by dhanustankar.*' Dual causes of the disease were also mentioned by some: '*At the time of delivery the illness may happen. Dhanustankar can also occur if any place of the body is cut.*' A rural mother with a PIC narrated an interesting cause of tetanus. According to her if a pregnant woman took water standing under a rainbow in the sky, her child would get tetanus and it would bend like a bow. Two other mothers said: '*Allah has given the disease.*'

The mother of a PIC related tetanus with measles and narrated an event that happened to her nephew. According to her, he first had measles and they sought a lot of treatment for him but he was not cured. He became very weak and one day he lost his sense, his tongue came out and finally he died. So she thought that her nephew got the *dhanustankar* from measles. Another mother explained that when *grahan* (solar and lonar eclipses) takes place and the *hamildar* (pregnant) women did not obey certain rules then they would get the illness.

Tuberculosis (TB) : Although TB was almost universally termed as *jaksa* in both rural and urban areas, one of the respondents thought the two (*Jaksa* and TB) were different illnesses. She said,

'In TB, yellowish cough comes out while coughing, but in jaksa blood is present in that yellowish cough. Jaksa is never cured but TB is curable.'

The mothers thought that TB affected adults more than children. Many rural mothers identified the condition as -- '*severe and repeated coughing associated with fever, and blood appearance of out with the cough.*' They also mentioned that the affected person cannot eat in this condition and that his/her body becomes weak. The urban mothers mentioned more or less the same symptoms. According to them, along with severe and repeated coughing, the TB patient got difficult breathing and had a watery stomach. Loss of weight was another symptom. However, the mother of a partially immunised child from the urban area distinguished the cough of TB from normal cough: '*In jaksa the cough sounds jhakkar jhakkar.*' Another mother classified TB into two types according to symptoms: '*There are two types of TB, one is jaksa TB and another cancer TB. Once I had guti (pimples) on my shoulder that is cancer TB and in case of jaksa TB, one usually has severe cough associated with spitting blood.*' A mother identified cold and respiratory problem as the cause of TB. Another mother ascribed the bone fever as the cause of the illness:

> TB can attack anybody but the kids suffer less from it. When they become adult they may have TB. TB develops from *haddir jvar* (fever of bone). At the infant stage the children have a feverish tendency in their bones. Due to carelessness of mothers the baby gets cold from the ground and that causes fever of bone. It cures automatically with the development of the baby. Sometimes it remains suppressed in the body and later surfaces as TB.

Others identified cough, cold and smoking as important causes. One of them said, '*smoking a lot, makes one susceptible to the illness.*' Two mothers considered this illness synonymous with infections that spread from one person to another. According to them the affected person ought to be kept in a secluded place.

The mother of a FIC stated that the disease appeared suddenly; another mother in the same category considered it hereditary. The mother of a PIC made a connection between smoking, tension and heredity with the illness. She reported that she herself had 'cancer TB' because of

mental tension and hunger. She went to the hospital and was given pills (*bari*). She took the medicine for sometime and then stopped because she got pregnant. Presently she buys medicine if she has money, otherwise not. Her husband also got the illness which, in her opinion, was caused by his smoking and since he had to work hard all the time. Besides, his brother also had TB that killed him.

Whooping cough: *Hukkur kas*, *tin meyadi kas* and *huping kas* were the local terms for whooping cough. Since children with whooping cough sounded '*hukkur hukkur*' at the time of coughing, the mothers called the illness *hukkur kas* (cough). Again, the mother of a PIC described the condition as *tin* (three) *meyadi* (duration) *kas* (cough) as the cough continued for three months. Some mothers of fully and partially immunised children also called the disease as '*huping kas*'.

The knowledge of symptoms of whooping cough was not common. One mother of a FIC said, '*I heard that the child in this condition coughs repeatedly and becomes weak.*' Another mother added 'fever' with these symptoms. A mother said that during the illness the cough lasted long and the face becomes reddish because of cough. While talking about the symptoms, the mother of a FIC drew a line between TB and whooping cough. According to her the child coughed for a long duration in case of whooping cough but in TB blood came out along with cough.

Diphtheria: Although diphtheria was not a commonly recognized illness among the mothers, nevertheless in the study area some terminology were found in use. The mothers were found to refer the term as *dipthe* and *ghaga*. *Dipthe* was probably the local short-cut for diphtheria. *Gha* is ulcer and the mothers perhaps indicated an ulcerative condition by the term.

The mothers of neither rural nor urban areas had a clear understanding of diphtheria. They often mixed it up with another condition in which the babies had white layer on the tongue interfering with drinking. The mothers usually rubbed the tongue with a piece of cloth dipped in honey or mustered oil to remove the layer. '*Phaha*' was also an illness of the child, which was often described as close to diphtheria in the areas. The women described the symptoms in the following way: '*It happens inside the mouth of abudda (child). The face becomes enlarged and the child*

cannot eat anything.' They further said, 'Phaha *can be seen on lips, tongue and even on throat. A white light layer is seen all over the place.*' According to a local health worker, the illness was different from diphtheria but as some symptoms were similar, some mothers termed diphtheria as *phaha.* However, the mother of a FIC said, '*I do not know about the illness. I heard it from the doctors. I was told the name while the injection was being given.*' None of the mothers of partially or non-immunised children in rural areas were familiar with the disease.

The only cause of the disease mentioned in the urban area was vitamin deficiency. The mother of a FIC in Bhairabpur explained : '*Diphtheria occurs if tika (vaccine) is not given. Because of diphtheria the child's abdomen becomes larger than the body and it happen due to vitamin deficiency.*' Another mother said, '*I heard that if a mother chews betel leaf and drops lime on the bed her child will get the illness.*' Since only few mothers from either rural or urban area could state the cause of the disease, clearly they rarely have had any experience with the disease.

Reasons for partial or non-acceptance of vaccinations

Reasons for not completing all doses of vaccination

Occurrence of side-effects is one of the major reasons in the rural areas, for which most of the mothers of partially immunised children did not complete the vaccination schudule of their children. A mother of Bashgari went to vaccinate her child because she heard that vaccination prevented the diseases. After receiving vaccination, according to her, the opposite happened. The child got fever and had terrible pain. Her husband also became very angry. As a result she did not take her child for the next doses. Another mother from Purbakanda said, '*After receiving vaccine the child suffered from fever and cried and it was impossible for me to do the household work.*' In the words of another mother,

> When the child began to trouble me in the household work after receiving the vaccine, I stopped vaccinating her any further. Besides, I also got nervous and frightened to see the child being vaccinated with the needle. So I did not go to the centre anymore. The child's father also said that if vaccination creates trouble then what is the point in getting vaccines ?

Accessibility of the rural vaccination sites was another reason why the mothers could not continue vaccination of their children. One mother from Bashgari said, *'I went to my father's house and I did not know where the centre was, so I could not continue.'* Another mother from Atkapara said, *'I was not informed about the centre. Generally I went with the other women in the neighbourhood but last time they went without informing me.'*

Also in the urban areas the mothers could not comply with the vaccination doses because of lack of accessibility to services. It was mentioned that sometimes the vaccination place was located at a distance from the mothers' residence and that they had to spend money for going there which was beyond their ability. It was also found that the mothers kept on waiting for the health workers to come for the next dose. Sometimes, the mothers were not present in the house while the health worker visited as well. A mother from Ramshangkarpur reported that she could not continue because there was no supply of vaccine in the centre. A mother of Kalikaprashad reported that since she lost her card she had to discontinue from going to the vaccination centre.

A number of mothers in the urban area also mentioned side-effects as a reason for discontinuing the vaccination. So a mother from Kalikaprashad said that her child had gotten infection over the place and hence did not go again.

Reasons for not immunising a child

In the urban setting it was noted that the mothers of children not immunised in Bhairabpur did not vaccinate their children out of negligence. On the other hand, due to lack of access to services the mothers of Ramshangkarpur did not vaccinate their children. They mentioned that they had to cross a river to go to the vaccination centre. The mothers were worried that their children might be drowned while crossing the river, so they avoided to go to the vaccination centre. Still, the mothers reported that during rainy season it became easier to cross the river by boat. Again, one mother complained that the health worker came earlier to her house and asked her to go to the hospital, but it needed money for transportation. The mothers of the other urban area like Rishipatti and Kalikaprasahd also mentioned about inaccessibility to services.

The study also revealed that often the mothers were not well informed about the vaccination schedule of the centre and at times went on a wrong day. For example, a mother in Rishipatti grumbled, '*I went four times to receive injection but was not successful.*' She went first to the Thana Health Complex but they said that they did not provide vaccination; they just worked for family planning and with pregnant women. She then went to 'Matrisadan' and there she was told that they gave vaccination on Thursdays. Again when she went on a Thursday, they told her that they were finished for the day and that she has to come the next Thursday. She did not go to that centre again. Rather, she went to a nearest office (did not mention the name of the office clinic). They told her to come on Monday. She became tired and angry. She also said that her husband did not like this whole episode; she went but returned empty handed so many times and for this purpose her husband spent a lot on rickshaw fare. It should be mentioned here that women do not travel long distances on their own because of cultural reasons.

The other reasons mentioned by the mothers included fear of side-effects and disliking by the husband. For instance, a mother from Rishipatti said that she did not vaccinate her child because her husband did not like it. Another mother of Kalikaprashad informed, '*I do not understand the need for vaccination so I did not give tika to my child.*'

The mothers in the rural areas also mentioned a variety of reasons for not vaccinating their children. Some mothers in rural areas mixed up the notion of vaccination for protection with the treatment of diseases, therefore, refused to go for vaccination. A mother from Purbakanda said, for example, '*My child does not suffer from any disease, so I do not feel the need to get tika for him.*' Some mothers expressed their anguish that despite vaccination certain children suffered from diseases and died. One mother of Bashgari said, '*I heard that if tika was provided the child would not get the disease but a child that I know of did not survive after receiving vaccination.*'

She further told that if Allah did not provide life there was no other way to survive. From the same point of fatalism another mother from Kalikaprashad said that whether vaccinated or not, the disease would occur to the child anyway. She mentioned that her neighbour's child died in spite of receiving the vaccination. So in her opinion only God could protect from illness.

Because of the possibility of side-effects some mothers were found to be afraid of vaccinating their children: 'I was told that vaccination was not a good thing, because it caused fever to the child.'

It was also noted that the mothers of NIC had little knowledge about the vaccination schedule. So sometimes a child with age limits already over was taken for vaccination. A case in this report was reported in Purbakanda, for instance. The mother went to her parental house and the vaccine centre was away from that place. When she came back, the child already passed one year and the vaccinator did not give vaccination to the child. It must be mentioned here that the mothers of young children frequently visit there parental house located mostly in other villages.

Many of the mothers of the rural areas also reported that they were not informed about the routine vaccination centre in the village. Sometimes they did not get a message about the arrival of the vaccinators. Again the mothers from Atkapara complained that the vaccinators did not come to their village. They sometimes came to a nearby village and sent messages to them. All these have to be understood in the context of rather limited mobility of women in most rural areas of Bangladesh. The mother further complained that the health workers visited all on a sudden and that some mothers could take advantage of it but others could not, particularly because of distance. There were a few cases of missed opportunity. Some mothers said that they went to the site but nobody was there. In this case a mother from Kalikaprashad said that the health workers came and stayed only for a while.

Among other reasons the mothers mentioned their household workload. A mother from Purbakanda said that she had much work to do in her house, so she could not manage to visit the centre. Another mother from the same area mentioned a similar reason and emphasized that her child was very young and she was alone in the house. Nobody was there to help her. So she could not have her child vaccinated.

Intra-village feud also appeared as a reason for not taking the child to a vaccination session. A mother from Atkapara said, '*We do not go to that house where the vaccination session is held. We have a family conflict. My husband told me not to go to that house for any purpose.*'

Box 6.1: Male or Female vaccinator?

Abida is the mother of a partially immunised child. She was asked whether she would bring her child for the next dose or not. She answered that she would not because the vaccinator was a male. Since her husband did not like that a male vaccinator communicate with his wife, he might not allow her to come again. Without her husband's permission she could not go anywhere.

Satisfaction with the technical competence of the vaccinators was another important factor to take into consideration, in regard to the compliance with immunisation. Mothers' opinion about the technical competence of vaccinators was quite explicit. Mothers of fully immunised children of rural areas were generally pleased with the technical competence of the vaccinators. One mother emphasized the point that they had to be competent because they were doing their job. Almost all mothers of partially immunised children had no complaints regarding the technical competence of vaccinators. However, lack of faith in the training of vaccinators was apparent when a mother was interviewed after a vaccination session. *She said, 'Although they were giving tika in the right way, I think they were not well trained. An old man came along and showed them how to do it.'*

In the urban situation a slightly different picture emerged. Most mothers of FIC and PIC said that the vaccinators did their work properly and that they had no complaints. One mother of a FIC was, however, grumbling, '*I did not like the way of pushing the injection by the vaccinators. He made my child stand and gave him injection that caused great pain. I was also frightened.*' Conversely, a mother who was interviewed just after a session said, '*The vaccinator held the needle strongly and that made my child hurt, but otherwise it was not possible to vaccinate.*'

Two more cases on perceptions of vaccinator's competence may be narrated. A mother from Bhairabpur took her child to be vaccinated at an NGO clinic. She thought that the vaccinators pushed the injection at a wrong place. In her opinion, they wanted to push the injection into the vein but it went through the flesh. In another case, they pushed the injection into flesh but it went into the vein. So the medicine became stuck in one place, according to her. Ultimately it reacted and the place swelled up and was infected. The child needed to be operated upon. In the second case, a mother narrated the following story:

> My child had problems after receiving the tika and that happened due to the vaccinator's mistake. When the vaccinator vaccinated the child, the place began to bleed. I was very frightened, as the blood spread out all over my *saree*. I asked the vaccinator for the reasons. He agreed that he made a mistake and that the injection went into the vein. He also told me that they injected so many babies, but hardly ever such a thing had happened in the past. I was unlucky that it happened to my child. They assured me that it would be cured, but my child suffered a lot. A big abscess appeared in that place; it was totally red and soft. Then I took a hot needle and drained out the pus from the place. The child also had fever. Finally I took her to the Utsharga (NGO) clinic for treatment.

Use of appropriate instruments at the time of vaccination was also considered by mothers as a means of measuring the technical competence of the vaccinators. The mother of a fully immunised child said, *'I went to Sheba office (an NGO clinic) for receiving first dose of vaccination for my child, but I observed that the vaccinators used old needles for vaccination. Then I decided that instead of Sheba I would go to Matrisadan for the second dose.'*

Sometimes the information (e.g., side-effects, contra-indications) provided by the vaccinators during immunisation sessions was not much comprehensible to the mothers, which made them complain against the vaccinators. The mother of a partially immunised child of Purbakanda reported that her child fell severely ill after receiving three injections. Yet she brought her child again for vaccination, but the vaccinator sent her back by saying that her child was too weak to

receive a tika. Since the vaccinator did not explain the situation to her, she did not feel the urge to go back.

Acquaintance to the vaccinators was noted as important criteria on how the mothers recognized the technical competence of the vaccinator. It was found that since most of the vaccinators lived nearby they were familiar to the mothers. Mothers were found to appreciate the competence of their known person. Accordingly, a mother from Bashgari said, '*Nazrul is from our area, he has given the vaccine in a fine way.*'

Quality of information provided

The study revealed that the mothers of both rural and urban areas went to the vaccination centres and returned immediately after the vaccination was completed. They hardly had any time to receive any information from the vaccinations. Sometimes the vaccinators were very busy and in a hurry with their work, so the mothers also could not get any chance to talk to them. One mother of a fully immunised child from Kalikaprashad explained, *'In the centre it was very crowded. The vaccinators were too busy to tell us names of the diseases for which tika was given. I heard the names when two vaccinators were talking to each other.*' The mother of a non immunised child of rural Atkapara said, '*They visit suddenly. So only some mothers are able to go to the centre, others cannot. There is a heavy rush there. We can not wait for long since we have a lot of work in the house.*' It was noted that although little or no information was exchanged between the mothers and the health workers/vaccinators, the mothers were eager to receive more information about vaccination. One mother of a fully immunised child from Kalikaprashad said, 'I wanted to know for which diseases it was given and what the drops were, for but they did not give any answer and I was so sad.'

Some other views were also expressed. The mother of a fully immunised child from urban Bhairabpur said, *'The vaccinator talked a lot with us. She asked how we were, and advised us not to be frightened and it would not harm the child.*' Regarding time and session for the next vaccination session, it was noted that since some of the centres were fixed so it was not necessary to inform. Even in respect to the outreach centres it was seen that the places were more or less

fixed. The dissemination of information at the time of the session was found to be problematic sometimes. In the rural areas, often the vaccinators informed the mothers after they (vaccinators) had reached the place for vaccination. Further, regarding contraindications the vaccinators found not to inform the mothers in advance. Yet, if any child came with these conditions then the vaccinators sent them back. Most of the time they did not explain the situation to the mothers that left some of the mothers disappointed.