

# The barriers against childhood immunizations: a qualitative research among socio-economically disadvantaged mothers

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**Background:** The socio-economically disadvantaged populations are among the most vulnerable groups that are under-vaccinated. Therefore, the aim of this qualitative study was to understand the behaviours of mothers concerning the immunization of their children, the decision-making process, the perceived barriers, and the enabling factors to access the services in a suburban population in Istanbul.

**Method:** Eight focus group discussions and two in-depth interviews were carried out with the mothers who have children younger than five years. **Results:** While the responsibility of immunization was left totally to the mother, the socially subordinate role of women did not provide the means of getting the immunization services. The women were dependent mostly on social networks for getting the immunization services. Another important barrier to the services was related to the economical constraints and accessibility of the services. In addition, the lack of effective communication and information transfer between the health personnel and the mothers formed an important obstacle.

**Conclusion:** This study underlines a need for an effective counselling tailored to the immunization session, which will maintain a positive relationship between the personnel and the mother.

**Keywords:** barriers, immunization, qualitative, Turkey, vaccination

The national vaccination schedule of Turkey includes Bacille Calmette-Guérin (BCG), oral polio (OPV), diphtheria, tetanus, pertussis (DTP), measles and hepatitis B vaccines (HBV). Recently measles, mumps, rubella (MMR) and Haemophilus influenza type b (Hib) vaccines were also included in the national programme. In Turkey, the vaccines that are included in the national programme are provided free of charge through the health centres of the Ministry of Health. However, antigens that are not included in the national programme, as the varicella vaccine, can be purchased only from pharmacies or private clinics on demand. Pharmacies and private clinics also provide the vaccines that are included in the national vaccination schedule for a certain fee.

In the Turkish Demographic Health Survey<sup>1</sup> conducted in 2003, it was determined that the rate of being fully immunized was 48% and 3% of the children received no vaccine at all until the age of one. The same survey pointed out to several socio-demographic and economic indicators that were associated with the low level of vaccination uptake. Living in a rural region, living in the eastern part of Turkey, having a non-educated mother and having a high birth order was related to the low likelihood of being vaccinated.<sup>1</sup>

Other surveys carried out in different parts of the country also determined low rates of coverage and similar factors associated with low rates of vaccination uptake.<sup>2–7</sup> As pointed out in these surveys, improving socio-demographic and economic indicators as well as providing better services are essential in achieving higher levels of immunization coverage. Still it is also important to evaluate the low coverage rates through understanding the cultural context, personal decision-making processes, and perceptions of immunization services by utilizing qualitative methods.

To our knowledge, there are no studies in Turkey that aim to assess the beliefs and attitudes that shape the immunization practices of the families. Surveys pointed out that the socio-economically disadvantaged populations are among the most vulnerable groups. Therefore, the aim of this qualitative study was to understand the behaviours of mothers concerning the immunization of their children in a suburban population in Istanbul.

## Methods

This study was carried out in Umraniye, a suburban district of Istanbul, which is composed of a socio-economically disadvantaged population with mostly a traditional family structure. This region gets migration from generally the eastern and the northern parts of Turkey. Although the overall rate of being fully immunized under the age of one was 79.5%, some of its neighbourhoods had much lower coverage rates.<sup>2</sup>

In this community, the most deprived population lives in slums. So the neighbourhoods that were composed of slums were selected as the research area. In the selected area, the primary level health care services are provided through only one health care centre. This health centre provides ambulatory care, immunizations, reproductive health, and health education services to the community members. There is also one government hospital and several private outpatient clinics in the study area.

Two of the researchers visited the slums and asked mothers, who had children younger than five years old, to participate in the study. Eight focus group discussions were carried out with the eligible mothers at the houses of the participants. Conducting new focus groups continued until no new information was obtained. Each focus group consisted of 8–12 persons and lasted 41–78 minutes. During the recruiting process a mother whose children had no vaccination at all and a mother who was exposed to domestic violence was identified. These two mothers were not included within the focus groups, but instead in-depth interviews were conducted with each one. Among the 73 women who were asked to participate, three women did not agree to participate in the study stating that the

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timing of the focus group discussions was not appropriate for them and they would not be available. Participants were asked to give their oral consent for audio taping the discussions. As one of the researchers facilitated the discussions, the other researcher took notes.

A semi-structured interview guide was developed within the light of the existing literature. The interview guide explored the beliefs and attitudes towards immunization, the decision-making process, the perceived barriers, and the enabling factors to access the services. Focus group discussions and in-depth interviews were transcribed verbatim. Key themes were identified and a coding frame was developed. The comments of the mothers were referenced with the generated themes. Two of researchers who took part in the coding process exchanged the coded material to ensure the reliability. Word processing program was used in the data analysis.

At the end of the focus group discussions and the in-depth interviews, all the participants with incomplete immunizations were invited to the primary care health centre (PHC) to complete their vaccinations.

## Results

The age of the participants ranged from 21 to 43 with a mean and a standard deviation of  $30.3 \pm 5.5$ . All of the participants were housewives and had an education of primary school or less. The mean number of children women had was  $2.4 \pm 1.3$  with a maximum of eight. All the women had at least one child younger than 5 years old. The participants had migrated to the area from the northeast, east, and southeast parts of Turkey.

### *The perceptions of mothers—is immunization necessary?*

The mothers participating in the study considered childhood infectious diseases, particularly those causing high fever, as an important health issue due to their risk of resulting in disability or death. These concerns were mostly related to personal incidents or the experiences of the family members and were mainly from the times when there was no access to immunization services. So the mothers were aware that disability and death could be prevented by means of immunization.

*'One of my sisters had died in our village. We, all of my sisters and me, had measles but one of my sisters could not overcome, she had died. Measles was a very severe disease. There were no vaccines in the village then, also there were no hospitals. . . .'*

Mothers believed that immunization would build overall resistance. There was a widespread belief that diseases would develop only mildly and stay limited if the child had been vaccinated.

*'Vaccinated children are more resistant (to diseases). If the child is vaccinated he/she develops the diseases only mildly, but if the child is not vaccinated the consequences would be more severe.'*

Yet the advantages of vaccination were not prevalent among some others. These mothers could not explain the benefits of vaccination; they would rather consider immunization as important and essential since it was demanded strongly by the health personnel. The negative attitudes of the health personnel when the mothers had missed or delayed a vaccination session made them think that immunization was important and needed.

*'If vaccines were not needed, the health personnel would not become so annoyed when we miss a session.'*

Although it was not a widespread opinion, there were also mothers who believed that vaccination was not essential.

A mother who was not vaccinated and stayed healthy believed that vaccination was not a need for her children.

*'Were we getting any shots in our villages? God preserve us, none of us had anything bad.'*

Although most of the mothers believed that vaccination was essential, some were not aware of the importance of being fully vaccinated. Opinions, which came up among the mothers who had migrated from the southeast region of Turkey, were that vaccines were not needed after the age of one, some of the doses could be left out or the missed doses could be completed at school.

*'If the child lives up to the age of one, then there is no need for any other shot.'*

### *The knowledge concerning the names of the vaccines and the national vaccination scheme*

Mothers were not able to name all of the vaccines that were in the national immunization scheme. The mothers knew that the names of the vaccines were written on the immunization cards of their children, yet they had problems in remembering their names. Particularly the illiterate mothers stated that they had difficulty. They also stated that some of the names written on the cards—medical terms—seemed unfamiliar to them.

*'It is written (on the card) hepatitis, measles, tuberculosis, I do not know, there are some different names.'*

Mothers also did not know which vaccine was administered to their children. This was because they could not read the name of the vaccine from the vaccination card and they could not get satisfactory information from the health personnel administering the vaccine.

*'You can not understand it (which vaccine was administered) from the card; also they (the health personnel) do not say anything. You just take the child and they give the vaccine.'*

Although some of the mothers stated that they wanted to know which vaccine was administered, they were inhibited by the negative attitudes of the health personnel.

*'We do not even know which vaccine is administered to our child, we can not ask, we do not have the courage to ask.'*

Most of the mothers stated that it was important to follow the scheme promptly. Yet they could not explain what would happen if they had delays. Again, the attitude of the personnel made the mothers think that it was very important not to delay the shots.

*'I know that the vaccines should be administered on time, but I do not know what would happen in case of a one month delay.'*

### *The barriers against getting immunization services*

Mothers explained a number of conditions that complicates or prevents getting immunized. These conditions will be examined below in four different categories.

#### **Conditions related to the status of women**

Nearly in all of the families, the responsibility concerning the vaccination of the children was left only to the mother. Mostly, the fathers did not pay attention to such a need.

*'Mostly I think about taking the child to immunization, the men do not consider this, they even do not ask. They (the fathers) are very close to their children, but the mother makes the decision (to take the child to the immunization session).'*

*The men do not know this since they were brought up in the villages; they themselves were not vaccinated in the villages so they do not ask about it.'*

Although the responsibility was left to them, some of the mothers who had not gone outside of their neighbourhood alone in their entire lives felt that they were insufficient to leave the house and find the way to the health centre by themselves.

*'I am a person who had never left the house. I do not have the courage to go from here to there because I am constantly at home. I was also grown up in a village, and also in the village you are always at home, we had come here (to Istanbul) and I am constantly at home here too. If you ask my husband he knows everywhere in Istanbul. . . . If you tell me to go from here to there, truly I will become terrified. I also tell my husband that if I get lost I probably will cry just like a child. . . .'*

Some other mothers had to take permission from their spouses or the elder members of the family in order to go out alone.

*'I can not leave the house with my children because my spouse does not let me. Problems raise when I do so, I only go to the market alone because it is very near.'*

Since some mothers were not able to go out alone, they tried to take their relatives or neighbours with them to the immunization session. However, if the mother did not have a relative to support her, she again could not access the services.

*'I had asked my husband, to my neighbors (to take me to the session), they said that they were busy and they could not take me. Then I could not say anything, I could not raise my voice.'*

Decision-making process for taking the child to the immunization session also includes other members of the family as the *mothers-in-law*, particularly if the mother is living with them. The mothers stated that, particularly in the villages, mothers-in-law did not let the newborns or the small aged babies to get vaccinated. They would also not let the baby get more than one shot at a time.

*'For example I took my baby for vaccination in the village, she had two shots at a time, one was DPT, and I do not know the name of the other one. I came home and I told my mother in law, ooooo that day she said 'what will I do with you, how could you let two vaccines to be administered at a time for such a young baby', that day I cried so much, I stayed awake by my child until the morning because I thought something bad would happen to her.'*

Also the responsibilities and the burden of work at home prevent the mother to take the child to the immunization session. The presence of a patient needing continues care at home, lack of support in case of death of a family member, and even guests at unexpected times restrain the mother to access the services.

*'The guests had come unexpectedly; you can not say to the guest to stay at home so that I could take the child to the session, we can not do such things. . . .'*

In some other families the problems with the spouses or domestic violence prevented vaccination to be a priority for the family. In some cases, the father, as the breadwinner, did not provide any money for transportation for the mother to access the immunization services.

### Conditions related to the accessibility of the services and the economical constraints

If the health centre is distant then it is hard for the mother to take her child to the session.

*'The health center is far away, that is why I could not get my child (to the health center)'*

Although the Turkish Ministry of Health provides all the vaccines free of charge, mothers need money for the transportation. Some mothers could not fully vaccinate their children because of not having any money for the transportation.

*'Vaccines are free, but you need to find money for the transportation, since we could not find the money we could not take the child (to the immunization session)'*

In some other instances, immunization could not be a priority due to the economical problems within the family.

*'When there are problems at home I can not think of anything, I even forget about the children. My husband had closed his business, he was not employed for a couple of months, this had a reflection on the children, on our house. I forgot the children, I neglected the children, otherwise it (the shots) would not have been incomplete.'*

In Turkey, the PHCs serve a population living in a geographically defined area. The PHC accepts the child if the family is living in a neighbourhood that belongs to the health centre. But the mothers sometimes do not know which PHC they belong and contact the nearest one. In these instances the mother is redirected to the correct PHC which complicates the accessibility. Also sometimes, the mother is directed to another PHC without getting the shot.

*'I went to one of the health centers in Umraniye, they chased me out, I had my child on my back, and I went to another one.'*

### Conditions related to the attitudes and behaviours of health care workers

There was a widespread opinion that children who had infections should not get vaccinated. This view had sometimes originated from the sayings of the health personnel and mothers pointed out that the health personnel postponed the session when the child had fever. Some of the mothers who missed the day of the immunization did not go to the PHC once again.

*'Of course when the child is sick they (the health personnel) tell you to go and come back the next week, it was like that. My child was sick then, he had measles so I could not take him (to the immunization session), the last two shots were left out, I do not know which ones they were, I could not take him (to the PHC) afterwards.'*

The health personnel also did not want to give more than one shot at a time for premature or small gestational aged babies and postponed some of the shots for these babies.

*'My son had all his vaccines on time. But my daughter was premature, she was very weak. Some of the vaccines are administered two or three at a time. But the doctors and the nurses did not give more than one shot at a time for my daughter. Because she was weak, they used to postpone some of the shots; they used to give one shot at a time and postpone the other to the next month.'*

The attitudes of the health care workers towards the mothers are very important for making use of the immunization services. The mothers stated that they were reproved severely in instances when they had wrong practices, wrong information, or when they had asked questions. This was evident particularly when the mothers missed an immunization session. The negative and the judging attitude of the health care workers when the mother delayed the session made

mothers uncomfortable. Therefore, the mother did not want to get the services when she had missed one session.

*I also have this fear; my child has a delayed shot. They (the health personnel) yell at you when you go to the health center, they say 'why did you wait so long, are you living on top of a mountain?' I do not want to get this reaction. I am a bit withdrawn person, I feel like sinking into the ground.'*

## Other causes

### *Rumours about the vaccines*

*'We have heard that the polio vaccine causes sterilization.'*

All the mothers had heard this rumour during the national immunization days for the polio vaccine when mobile teams visited households to give immunization. Some of the mothers stated that they did not believe in this rumour and some indicated that they had hesitated, but still most of them let their children to have the polio vaccine. There were only few women who refused the polio vaccine because of this rumour.

*'They (the health personnel) called me from the door (of my house), they told me to bring my child so that they could immunize him, my eldest was a boy, I did not take him, and I said to myself this is my only son, just in case.'*

Also there was a rumour that expired vaccines caused paralysis.

**Neglect** Some mothers indicated that they had *neglected* the immunizations of their children. However in many instances although the mother used the word 'neglect', it was determined that the social, cultural, and the economic barriers which are mentioned above were the underlying reasons.

## Discussion

Mothers, were aware that childhood diseases could cause disability and death and they mostly perceived childhood immunizations as a beneficiary and a necessary practice. This was partly because the experiences about the consequences of the vaccine preventable diseases were still fresh in the minds of these mothers. Knowing or witnessing childhood deaths and disability from these diseases might have caused a risk perception and a motivation for immunization among the mothers.<sup>8,9</sup>

We should however note that there were few mothers who did not perceive immunization as a necessary practice for their children. Yet, these women did not truly refuse vaccination, rather they had a lack of awareness concerning the benefits of vaccination. This finding was related to the experience of '*not being immunized but still staying healthy*' and it was different from the concerns about the safety of immunizations, which was recognized in the industrialized countries.<sup>10-13</sup> This way of thinking was brought up by the mothers who had migrated from the southeast region of the country, a region with the lowest socio-economic indicators and vaccination coverage rates. This study emphasizes that special attention should be paid to this belief that could be an important barrier particularly among the residents and the migrants from this region.

This study recognizes the lack of effective communication and information transfer between the health personnel and the mothers as an important obstacle for getting services. As cited in other studies, it was determined that the mothers' knowledge related to the vaccine names and the timing of the immunizations was vague.<sup>14-18</sup> Mothers were not informed which vaccines were administered to their children. Also there was a strong opinion as '*immunized children would develop the*

*diseases mildly*' rather than the prevention of the disease itself. Similar beliefs were also recognized in other developing countries as immunization would build up the general resistance.<sup>15,19</sup> Since mothers lacked effective communication channels with the health care personnel, they tried to rationalize the need for immunization from the attitudes of the health care workers. The disapproving attitude of the health care workers when the mothers delayed the immunization session made them to perceive immunization as an important issue. This finding highlights a dependent relationship between the mother and the health care worker, which does not provide a ground for an effective information transfer. Although the mothers were convinced that vaccination was essential they were hesitant to ask questions or communicate with the personnel and so lacked the necessary information.

In fact as in other studies, several mothers stated that the attitude of the health care workers formed a barrier for getting the services.<sup>8,9,16,19,20</sup> When the mothers missed an immunization session they were hesitant to go for the next one.

Wrong contraindications were also observed to form a barrier. As in other studies, mothers believed that sick children should not be immunized which might delay the immunization.<sup>9,11,14,16,17,19,21-23</sup> But the striking finding was that this belief was supported by the health care personnel. There is a need to train the health care personnel about the right and the wrong contraindications regarding immunization.

Our study determined problems related to the providers attitudes and behaviour based on the perceptions of the mothers, so it is important to improve all aspects of the practices of the service providers.<sup>24,25</sup>

The social status of women was recognized to play an important role in accessing the immunization services. While the responsibility of immunization was left totally to the mother, the socially subordinate role of women did not provide the means of getting the immunization services. The patriarchal structure of the community made their acts to be closely monitored by other members of the family and women were mostly isolated in their neighbourhoods. In this context, social support from the neighbours or the relatives was observed to be crucial in accessing the services. However, in the semi-urban life when the mother could not have this support, she again could not take her child to the session. A study in the United States determined that particularly mothers with multiple children, less education, and low incomes had a higher risk of having under-vaccinated children.<sup>26</sup> Special attention and support is needed for socio-economically disadvantaged mothers in order to increase the vaccination coverage.

Another important barrier to the services was related to the economical constraints and accessibility of the services. Although the immunization services were free of charge, transportation needed money or the mothers had to travel long distances to access the services, which was also documented from other studies.<sup>8,15,14,18,19,27</sup>

Our study encompasses a population that had migrated from the rural parts of the country. The practices of an agricultural population are still prevalent in this community. All the women had heard the rumour that polio vaccine administered in the national immunization days could cause sterilization. Could this rumour have its roots in the reaction to family planning activities that had been promoted by the governments since the last 30 years? Could such a reaction result with the anxiety of sterilization in polio campaigns, which is another governmentally promoted activity? The power relationship between the state and the individual might have given a rise to such complot theories.

This study underlines a need for an effective counselling tailored to the immunization session. The health care providers can utilize a short counselling with a clear language, which will maintain a positive relationship between the personnel and

the mother. Simple but effective messages as the benefits of immunization and the number of doses until the age of one can be transferred through counselling. Also the personnel can be trained to recognize the barriers related to the mother through counselling. The providers should notice that the women are dependent mostly on social networks for getting the immunization services. The personnel should acquire capability in communication and problem-solving techniques to achieve these goals. It is also important to monitor the vaccination status of children and utilize reminding messages for under-vaccinated children. Another important issue is to address the wrong contraindications and not raise missed opportunities.

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Received 23 May 2006, accepted 5 October 2006