



Perceived Barriers of Child Immunization among Mothers of Under-5 Children in Urban Slum of Ludhiana City

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ABSTRACT

Introduction: In India, due to some barriers, the parents are not willing to vaccinate their children which lead to 3.2 million of children still not being vaccinated.

Materials and Methods: A descriptive study was conducted on 200 mothers of under-five children residing in filed practice area of UHTC, Shimlapuri. Structured interview questionnaire was applied on mothers to explore the knowledge on immunization & perceived barriers related to it.

Results: The study revealed that 50.5% of mothers of under-five children were having below average level of knowledge on child immunization. Child illness and low importance of vaccination were most occurring perceived barriers among mothers. There were other barriers like lack of accompany to go to center for immunization, and confusion about what age immunization has to be given, etc.

Conclusion: Current study necessitates the need to provide IEC (information, education and communication) sessions programs. This can be achieved by organizing health education campaigns in community. Parents and families need to be sensitized regarding importance of immunization to overcome the perceived barriers.

Keywords: Immunization, perceived barriers, mothers, under-five children.

INTRODUCTION

Childhood is very precious period in the human life cycle¹. Each child has basic human needs like adults to fulfill the essentials of life and to promote growth and development.² The children are a major part of our population, are embodiment of our dream and hopes for the future. They are the most vulnerable group in the society.

Prevention of disease is one of the most important goal in child care. During infancy and childhood, preventive measures against certain infectious disease are available³. Immunization is a way to protect the human body against infectious diseases through administration of vaccine.¹ Immunization

forms one of the most important and cost effective strategies for the prevention of childhood sickness and disabilities and a basic need for all children¹.

Global immunization coverage shows that 85% of world's children received 3 doses of diphtheria-tetanus-pertussis (DTP3) vaccines in year 2017. The number of children who did not receive routine vaccinations dropped to an estimated 19.9 million, down from 33.8 million in 2000.⁴ Approximately, 50% of all under vaccinated children live in three countries, India being one of them.⁵

In our country, the national family health survey (NFHS-4), conducted in year 2015-16, showed a marginal improvement in vaccination coverage of

India with 61.3% - 63.9% children aged 12-23 months being fully immunized (BCG, Measles and 3 doses each of Polio & DPT), above fact further verified by UNICEF coverage evaluation survey for the year 2005-16, showing immunization coverage improving to 62%.⁶

On aspect of life saving role of immunization, UNICEF estimated globally, that immunization is currently preventing an estimated two million deaths among under five children every year.² India has one of the highest under five mortality rates in the world with an estimate of 55/1000 live births in census of 2011.⁷ Latest SRS data shows that the infant mortality rate has been improved to 34/1000 live births.⁸ One of the factors contributing to under five mortality is ignorance of child care.² Government have launched initiatives like Mission Indradhanush and Intensified Mission Indradhanush to increase the vaccination coverage.

Due to some barriers, the parents are not willing to vaccinate their children and as a result, over 3.2 million Indian children aren't vaccinated.² Therefore, the study has been taken up to elicit the perceived barriers regarding immunization among mothers of under-5 children.

MATERIAL AND METHODS

A community based cross sectional study was carried out in the field practice area of Urban Health Training Centre, Shimlapuri of Department of Community Medicine, Dayanand Medical College and Hospital, Ludhiana, Punjab, India. It comprised of a population of 11,179. Cooperative mothers (n=200) of under-five children were selected as by convenience sampling technique. The study protocol was duly approved by Institutional Ethics Committee and necessary informed consent was also obtained. The data related to socio-demographic profile and Information related to immunization was collected. A pre-tested approved questionnaire set consisting of 30 questions was used to assess knowledge regarding general information, significance, immunization schedule and side effects of immunization. Knowledge level was categorized as per scores obtained under very good {Score 25-30 (81-100%)}, good {Score 19-24 (61-80%)}, average {Score 13-18 (41-60%)}, and below average { Score 0-12 (<40%)}. Another 21 point checklist to assess the perceived barriers regarding immunization among mothers was created which included personal, transportation, physical, cultural and psychological barriers. Analysis was performed using Statistical Package for Social Sciences (SPSS package), version 20 (IBM SPSS, Chicago, Illinois, USA).

RESULTS

The study included 200 mothers of under-five children. Table 1 shows the socio-demographic details of the mothers. The mean age of mothers was 28.2 ±4.08 years with 60% belonging to age group of 25 -31 years; 99% were married; 53% belonging to Hindu religion. Regarding educational status of the mothers, 34% were graduate and above, 31% were at secondary level, 23% were till 8th standard and 12% were illiterate. As per updated Kuppuswami Scale for year 2017, near 3/4th (72%) belonged to upper lower class.

Table 1: Socio-demographic profile of Mothers of Under-five children

Socio demographic profile	Participants (%)
Age (in years)	
18 - 24	033 (16.5)
25 - 31	120 (60.0)
32 - 38	045 (22.5)
39 - 45	02 (1.0)
Marital status	
Married	198 (99.0)
Divorced	02 (1.0)
Religion	
Hindu	106 (53.0)
Sikh	93 (46.5)
Valmiki	01 (0.5)
Occupation of mother	
Homemakers	190 (95.0)
Working Outside in Job	10 (5.0)
Number of Living Children of Mothers	
One	74 (37.0)
Two	84 (42.0)
≥3	42 (21.0)
Educational Status	
Illiterate	24 (12.0)
Elementary	46 (23.0)
Secondary	62 (31.0)
Graduation & Above	68 (34.0)
Socioeconomic Status	
Upper Class	4 (2.0)
Upper Middle Class	14 (7.0)
Lower Middle Class	26 (13.0)
Upper Lower Class	144 (72.0)
Lower Class	12 (6.0)

Table 2: Mean Score of knowledge regarding immunization among mothers of under-five children

Level of knowledge	Scores	Participants (%)	Median Score
Very Good	25-30	-	-
Good	19-24	01(0.5)	21
Average	13-18	98 (49)	15
Below average	0-12	101 (50.5)	11

(Maximum score = 30; Minimum score = 00)

Table 3: Rank order of categories of perceived barriers of under-five children

Rank order	Perceived barriers	Participants (%)
I	Physical barriers	137(68.5)
1	Child illness	72(36)
2	Card lost	17(8.5)
3	Fear pricks	11(5.5)
4	Reminder cards not sent by workers	11(5.5)
5	Seasonal migrants	10(05)
6	Fear of side effects	09(4.5)
7	Lack of resources	04(02)
8	Limited working hours	03(1.5)
II	Personal barriers	100(50)
1	Confusion of initiation of vaccination	24(12)
2	Lack of accompanying person	20(10)
3	Cost of vaccinations	16(08)
4	Long queues at clinics	16(08)
5	Irresponsible behavior of family	12(06)
6	Working parents	12(06)
III	Psychological barriers	66(33)
1	Low importance of vaccination	35(17.5)
2	Unpleasant experience at clinics	17(8.5)
3	Mistrust on staff	08(04)
4	Immunization not done in elderly siblings	06(03)
IV	Transportation barriers	26(13)
1	Distance from centers	15(7.5)
2	Lack of transportation	11(5.5)
V	Cultural barriers	01(0.5)
1	Religious beliefs	01(0.5)

Table 2 shows the median score of knowledge regarding immunization among mothers of under-five children, that none of the mother had very good level of knowledge and half of the total mothers were having below average level of knowledge i.e. <40%. Educational status showed statistically significant association with knowledge ($p < 0.05$).

Table 3 further sub-categorizes the perceived barriers of immunization among mothers into physical (68.5%), personal (50%), psychological (33%), transportation (13%) and cultural (0.5%). It also shows the overall rank order of all the perceived barriers namely: child illness, low importance of vaccination, confusion about what age immunization has to be given, lack of accompany person to go to center for immunization, unpleasant experience, loss of immunization card by the mothers, high cost of vaccination, long queues at centers, long distance from house to health center, irresponsible behavior of health workers and working parents, lack of transportation, fear of multiple pricks, reminder cards not sent by health workers and being seasonal migrants.

DISCUSSION

This study was done to find out mainly about the perceived barriers of mothers regarding immunization in Urban Slum area pertaining to UHTC, Shimlapuri in Ludhiana City of Punjab in India, as those barriers will guide us about strategies to cover the remaining gaps in immunization coverage. In this study, out of 200 mothers of under-five children, the mean age was 28.2 ± 4.08 years, majority (60%) were between the age group of 25 -31 years, married (99%), followed Hindu religion (53%), homemaker (95%) and belonged to upper lower class (72%). None of the mothers had very good level of knowledge and 50.5% of them were having below average level of knowledge regarding immunization.

Similar results were obtained by Farha Azmi et al, who conducted a study to assess knowledge regarding immunization in district Moradabad of state Uttar Pradesh. The results revealed that most of mothers of under five children (66.67%) having poor knowledge score regarding immunization.⁹ Savadi V et al, also conducted a descriptive study to assess knowledge regarding immunization among mothers of under-five children in Belagavi, Karnatka and found that most of mothers of under five children 34 (68%) having average knowledge score regarding immunization.¹⁰

In contrast, Sasi V et al, in their descriptive study, assessed knowledge regarding immunization among mothers of under-five children in Union Territory of Puducherry. The results of study revealed that most of mothers of under five children 40 (53%) having moderate knowledge and 28 (37.34%) having inadequate knowledge regarding immunization showing comparatively better awareness present there.¹¹

Yousif MA et al, in Saudi Arabia concluded in study that parents had good knowledge on aspects related to general role of vaccination (91.9%), timing of the first dose in vaccination schedule (86.9%). Poor knowledge was documented regarding importance of administration of multiple doses of same vaccine to child immunity (41.6%) and contraindication to vaccination (39.3%). But, gender, residence and educational level were found to be significantly associated with both parent's knowledge and attitude towards immunization.¹²

The present study depicts that child illness is most occurring perceived barriers among mothers. Rank 2 is given to low importance of vaccinations. Confusion of initiation of vaccines is at rank 3. Lack of accompanying person is at rank 4. Rank 5 is given to card lost by mother and unpleasant experience in the health center. Rank 6 is given to high cost of vaccines and long queues at clinics. Distance from

house to centers is considered as rank 7. Rank 8 is given to irresponsible behavior of health worker and working parents. Rank 9 is given to lack of transportation, fear of pricks, and reminder cards not send by health workers. Seasonal migrants are given as rank 10.

Similar findings were obtained by Qidqai W et al, in a study on various barriers of immunization. The results showed that hurdles against immunization were lack of education and lack of funds.¹³ Similar study on immunization in a tertiary care hospital of North India, revealed that the reasons for non-immunization were inadequate knowledge about immunization on subsequent doses, beliefs that immunization has side effects and lack of faith in immunization or polio vaccine is the only vaccine required.¹⁴

Another study in Karachi(Pakistan) revealed that the reasons for missing vaccination schedule were lack of understanding of next appointment, non-availability of health staff, mild flu and other reasons like household work.¹⁵ A study from Nigeria showed that mothers with children within one year of age, the parents objection (38.8%), long distance of walking (17.5%) and long waiting time at the health facility (15.2%), were the most common reasons for partial immunization.¹⁶ The study by Gul S et al, also concluded that the most common barriers were domestic work (55%) and distance to the health center (40%).¹⁷

CONCLUSION

The present study concluded that more than half of the mothers had below average knowledge regarding Immunization. It confirmed the perceived barriers related to immunization. Therefore, there is a further need to provide IEC programs. This can be achieved by organizing health education campaigns in community. Parents and families must be made aware regarding importance of immunization to overcome all those barriers and increase the immunization coverage.

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