SHORT ARTICLE

Primary immunization coverage among Migrant children in the age group of 12 to 23 months in Sriperumbudur Taluk, Kanchipuram District

Ruma Dutta[1], Priyadharshini Dekal[2], Timsi Jain[3], Dinesh Raja Jeyapal[4], Krithiga Sivakumar[5], Anuradha Ramachandran[6]

[1]Associate Professor,[2]MBBS III[rd] Year Student, [3]Professor, [4,5]Assistant Professor, Department of Community Medicine Department, Saveetha Medical College, Chennai, Tamil Nadu; [6]Assistant Professor, ESIC & RI Medical College Chennai, Tamil Nadu.

Corresponding Author

Address for Correspondence: Dr Ruma Dutta, Associate Professor, Community Medicine Department, Saveetha Medical College, Chennai, Tamil Nadu, India
E Mail ID: rumadr14@gmail.com

Citation

Dutta R, Dekal P, Jain T, Jeyapal DR, Sivakumar K, Ramachandran A. Primary immunization coverage among Migrant children in the age group of 12 to 23 months in Sriperumbudur Taluk, Kanchipuram District. Indian J Comm Health. 2017; 29, 1: 114-117.

Source of Funding: ICMR STS Project 2016 **Conflict of Interest:** None declared

Article Cycle

Received: 14/02/2017; **Revision:** 20/02/2107; **Accepted:** 01/03/2017; **Published:** 31/03/2017

This work is licensed under a Creative Commons Attribution 4.0 International License.

Abstract

Background: Migrants carry with them a burden of health risks and public health implications due to their poverty, unequal access to social benefits including health care services like immunization. **Aims & Objectives**: To describe the socio-demographic profile and the primary immunization status of migrant children in the age group 12 to 23 months and also identify the various factors related to immunization failure if any in Sriperumbudur Taluk, Kanchipuram District of Tamil Nadu. **Material & Methods**: A community based cross sectional descriptive study was done among 173 migrant children in the age group of 12 to 23 months from 12 construction sites in the study area between July 2016 – September 2016. The data was collected using a pre-designed, structured questionnaire. **Results**: The age group of mothers varied from 18-39yrs. About 46 (26.6%) mothers were illiterate. Majority of the children 159 (91.9%) had a birth certificate. Almost all 171 (98.8%) children were having immunization card. Only one child was found to be partially immunized. Lack of time was found to be the reason for not taking the child for immunization. All others 172 (99.4%) were fully immunized. **Conclusion**: Awareness should be created among migrant workers regarding importance of immunization through regular health education activities.

Keywords

Migrant children; Primary Immunization; Socio demographic factors

Introduction

Migrants carry with them a burden of health risks and public health implications due to their poverty, marginality and unequal access to social benefits including health care services like immunization. (1,2,3) The term 'migrants' not only includes the migrant workers and their families but also includes long-term and short-term immigrants, refugees and asylum seekers, victims of human trafficking amongst others. (2)

Immunization remains one of the most important public health interventions and a cost-effective strategy to reduce both the morbidity and mortality associated with infectious diseases. Globally 2-3 million deaths are averted by immunization- WHO

2016. (4) The Government of India declared 2012 as "The year of intensification of routine immunization" a campaign-like strategy to reach all children including migrants in remote inaccessible backward areas and urban slums. (5) The dropout rates are found to be higher in migrants who have poor service utilization. Studies have shown that immunization among migrant children is very poor in India. (6,7) A study done in Bhopal reports only 30% of the children of migrants were fully immunized. (8) There is no data available on immunization status in migrant children in the study area.

Aims & Objectives

1. To find out the socio-demographic profile and the primary immunization status of migrant children in age group 12 to 23 months.
2. To identify the various factors related to immunization failure if any in Sriperumbudur Taluk, Kanchipuram District of Tamil Nadu.

Material & Methods

Study type: A community based cross sectional descriptive study

Study Population: 173 migrant children in the age group of 12 to 23 months

Study Area: 12 construction sites in Sriperumbudur Taluk, Kanchipuram District of Tamil Nadu

Study Duration: July 2016 – September 2016.

Sample size: Based on the anticipated prevalence of primary immunization coverage as 50%, with an alpha error of 0.05, the limit of accuracy of 15 %, the minimum sample size was calculated as 173.

Inclusion criteria: All migrant children in the age group of 12-23 months in these construction sites were included in the study till we reached the required sample size.

Exclusion criteria: Those mothers who were not willing to participate in the study were excluded from the study

Sampling method & data collection strategy: Twelve construction sites were selected in Sriperumbudur Taluk by convenient sampling method. The data was collected from the mothers through interview with the help of a pre-designed, structured questionnaire consisting of a. Socio demographic history: It contained the details of the mother, information of baby and details of family, b. Immunization history: It contained the information about the primary vaccination history and reasons for failure.

Operational definitions:

Fully immunized: A child who had received all the Extended Program of Immunization (EPI) vaccines.

Partially immunized: A child who missed even a single vaccine is considered as partially immunized.

Unimmunized: A child who didn't receive any of the Extended program of immunization vaccine.

Ethical Approval & Consent: The study was initiated after obtaining clearance from both the Scientific Review Board and Institutional Ethics Committee of Saveetha Medical College. Information sheet with pertinent information was given to all the participants invited to participate in the study. Written informed consent was obtained from all participants prior to the conduct of the data collection.

Statistical analysis:

Data entry and analysis was done using Statistical Package for Social Sciences (SPSS) version 19 software. Simple proportions, descriptive statistics were calculated.

Results

The present study was conducted among 173 migrant mothers who had 12-23 months old children staying in the temporary settlements in the twelve selected construction sites. All the mothers who participated in the study were married. The age group of mothers varied from 18-39yrs (mean age 24.5 years). About 46 (26.6%) mothers were illiterate, 59 (34.1%) did their primary education and 68 (39.3%) were educated till tenth. In the present study, almost half 88 (50.9%) mothers were employed and remaining 85 (49.1%) were not employed.

Majority of the study population, 165 (95.3%) belonged to class IV socio economic class- upper lower class while remaining 8 (4.6%) belonged to class III- lower middle class according to Modified Kuppuswamy Classification (9). Most of them were Hindus 167 (96.5%), Christians 5 (2.9%) and rest Muslims (0.6%) by religion. More than half, 97 (56.1%) of the migrants were from Andhra Pradesh, 49 (28.3%) were from Madhya Pradesh, 11 (6.4%) were from Bihar and 16 (9.2%) were from southern districts of Tamil Nadu.

The background characteristics of children are given in Table 1. Majority of the children 159 (91.9%) had a birth certificate while the rest did not have birth

certificate. Of them, 7 (4.1%) births were not registered and rest 7 (4%) mothers were not sure about registration of birth.

Almost all 171 (98.8%) children were having immunization card only 2 (1.2%) were not having the card. 129 (74.6%) children were found to have BCG scar on their left upper hand. Only one child was found to be partially immunized. DPT3, Hepatitis 3 and Hib 3 and measles were not given to the child. Lack of time was found to be the reason for not taking the child for immunization. All others 172 (99.4%) were fully immunized. In the present study, none of the child was found to be un-immunized. The details of immunization of children are given in Table 2. Regarding the place of immunization, 162 (93.6%) of the children were immunized in Government, and rest 11 (6.4%) were immunized in private.

Discussion

In the present study about 26.6% of the migrant mothers were illiterate, 34.1% did their primary education and 39.3% were educated till tenth. A similar educational status pattern was also found by Balakrishna B *et al* (10) in their study on migrant construction workers in Bombay. Majority of the migrants in the present study were from the Northern States, similar findings were reported in other studies also. (10)

In the present study majority of the children were born in the institution (86.7%) and only 13.3% children were born in home this is very much similar to rising trends in India regarding Institutional deliveries. 78.7% institutional deliveries were reported in Annual report 2015-16 in the year 2013-14 in India. (11) Majority of the children were found to be in nuclear families which is similar to the study reported by Vijay Kumar *et al*(6)in Jharkhand.

In the present study 98.8% mothers had immunization cards while in a study done by Anand S *et al* (8), only 20% of migrant people were found to have immunization card.

Our study reported to have 99.4% immunization coverage whereas Anand S *et al*, Varsha*et al* (8,12) reported very low full immunization coverage among migrant children (17.5-20%). This reflects better services provided in Tamil Nadu as compared to other states. Moreover recently (Annual report 2015-16, MOHFW) there is increased focus of Government towards improving immunization coverage with programmes like Mission Indra Dhanush where Government aims at achieving 90% routine immunization coverage by the year 2020. (11)

In the present study only one child was found to be partially immunized. The reason quoted by the mother was lack of time. Anand S *et al* (8) in their study done on migrant population in Bhopal city also reported lack of time as the important reason for failure of immunization.

The overall immunization coverage was good. This might be due to good accessibility to immunization services, adequate knowledge of mothers. There is low dropout rate in the study area only one child missed DPT 3, Hep B 3, Hib 3 and Measles. The proper screening of immunization status might have been done by the health care personnel, when the mother came to the health facilities with their children for preventive and curative services.

Conclusion

This study among 173 migrant children in the age group of 12-23months, found to have good immunization coverage. The prime factor affecting the immunization status was lack of time. Further studies, will help us in understanding various factors influencing the status of immunization in migrant population.

Recommendation

Awareness should be created among these migrant workers regarding importance of immunization through regular health education activities.

Limitation of the study

Study covered migrant children from only few construction sites due to time constraints.

Relevance of the study

There is no data available on immunization status in migrant children in the study area. The current study gives a glimpse of the immunization coverage status amongst migrant children in the study area.

Authors Contribution

All the six authors have contributed equally in the preparation of the manuscript of this article.

Acknowledgement

The authors would like to acknowledge ICMR for funding this STS project. The authors are grateful to all the participants who took part in the study.

References

1. World Health Organization (WHO). Health of migrants: the way forward – WHO report of a global consultation, Madrid, Spain. 3-5 March 2010. Geneva, Switzerland: WHO, 2010

Available at URL: http://www.who.int/hac/events/consultation_report_health_migrants_colour_web.pdf. Accessed on 25th Jan 2017.
2. World Health Organization. (WHO). Health of migrants. Available at URL: http://www.who.int/hac/techguidance/health_of_migrants/B122_11-en.pdf. Accessed on 25th Jan 2017.
3. Biswas T, Mandal PK, Biswas S. Assessment of Health, Nutrition and Immunisation status amongst under -5 children in migratory brick kiln population of periurban Kolkata, India. Sudanese J Public Health. 2011;6;7-11
4. Immunization coverage, Fact sheet, Updated September 2016, Available from http://www.who.int/mediacentre/factsheets/fs378/en/ Accessed on 25th Jan 2017.
5. Vashishtha VM, Kumar P. 50 years of immunization in India: progress and future. Indian Pediatr. 2013 Jan 8;50(1):111-8. PubMed PMID: 23396784.[PubMed].
6. Kumar V, Sagar V, Karir S, Kumar M. Immunisation status among child between 12-23 months of age attending immunisationcentre at Rajendra Institute of medical science, Ranchi, Jharkhand. Int J Healthcare Biomedical Research, 2015; 3(3): 61-68
7. Awoh AB, Plugge E. Immunisation coverage in rural–urban migrant children in low and middle-income countries (LMICs): a systematic review and meta-analysis, J Epidemiol Community Health. 2016 Mar; 70(3): 305–311
8. Anand S, Verma P, Sinha U, Mahawar P. Evaluation of primary immunization coverage in migratory versus non-migratory labour population of urban area in Bhopal city, Ped. On call J.2014, 35.
9. K Park. Park's Textbook of Preventive and Social Medicine, 22st ed. Jabalpur: Bhanot Publishers; 2013. p 641
10. Balkrishna B Adsul, Payal S Laad, Prashant V Howal, Ramesh M Chaturvedi; Health problems among migrant construction workers: A unique public–private partnership project Indian J Occup Environ Med. 2011 Jan-Apr; 15(1): 29–32.
11. Annual Report of Department of Health & Family Welfare for the year of 2015-16. Available from: http://mohfw.nic.in/index1.php?lang=1&level=2&sublinkid=6140&lid=3991 Accessed on 25th Jan 2017.
12. Vaidya VM, Hanumante NM, Joshi AM, Mahajan S. Immunization Status of Under five Children in Migrants from Periurban Areas of Pune; National Journal of Community Medicine; 2013; 4(3): 457-460.

Tables

TABLE 1: BACK GROUND CHARACTERISTICS OF MIGRANT CHILDREN (N=173)

Background characteristics of child	Total (n)	Percentage (%)
Age:		
12 to 18 months	103	59.6%
18 to 23 months	70	40.4%
Sex:		
Male	89	51.4%
Female	84	48.6%
Type of family:		
Nuclear	169	97.7%
Joint	4	2.3%
Place of birth:		
Home	23	13.3%
Institution	150	86.7%
Birth order:		
1st	110	63.6%
2nd	60	34.7%
3rd	3	1.7%

TABLE 2: IMMUNIZATION DETAILS OF MIGRANT CHILDREN (N=173)

Vaccine	Frequency(n)	Percentage(%)
BCG	173	100
Zero dose OPV	143	82.7
OPV1	173	100
OPV2	173	100
OPV3	172	99.4
DPT1	173	100
DPT2	173	100
DPT3	172	99.4
HiB1	173	100
HiB2	173	100
HiB3	172	99.4
HepB1	173	100
HepB2	173	100
HepB3	172	99.4
Measles	172	99.4