

Health of Migrants' Children Living in Lucknow City: A Community-Based Study

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ABSTRACT

Background: Migrant workers suffer poor health due to underutilization of existing health services on account of their floating status, they are missed out on very basic registrations for health services like immunization, ANC visits, supplementary nutrition for mother and eventually the child. They form a major chunk of population that is skipped from ongoing attempts of universal health coverage and especially the children become vulnerable.

Objectives: To study the Immunization and Nutritional Status of migrant children of Lucknow and determine their environmental and living conditions.

Methods: A cross-sectional study was conducted among 217 intrastate and 183 interstate migrant workers in Lucknow. All randomly selected children 6-59 months of age paired with their mothers were the study population. A semi-structured questionnaire was used for interview. Length and Height of the migrant child were measured using horizontal and vertical wooden scale respectively. Weight was measured using seca weighing scale.

Results: Majority of children in these settings were in the age group of 6-12 months (55.8%). 98.4% of interstate and 95.4% of intrastate migrants do not have an immunization card of the child. Only 14.8% of the total children had fully immunized status appropriate to age. It was noted that among children of the interstate migrants, 31.7% were underweight and 25.7% had SAM while among children of the intrastate migrants 33.6% were underweight and 17.5% had SAM. Wasting was present in 40.0% children out of the total, while 33.1% of the total children were stunted. 73.2 of the interstate migrants and 84.3% of the intrastate migrants were living in a kutch house. A strikingly high percentage of 91.8% interstate and 90.8% intrastate migrants were still resorting to open field defecation. None of the houses had a separate kitchen.

Conclusion: The immunization and nutritional status of the migrant children was very low and poor. The living conditions of the migrant families were also below par. There is an urgent need of effective health policies for the migrant children to ensure their well-being.

Keywords: Migrant workers, Urbanization, Stunting, Wasting

INTRODUCTION

Rural to urban migration is an important strategy for millions of poor households in India to make both the ends meet^{1,2}. According to the 2011 census, the total number of migrants in India were 59 million by place of last residence. Uttar Pradesh accounted for 13 percent of the total number

of migrants in India (Office of the Registrar General and Census Commissioner, India, 2015)³. Migration opens avenues for better employment opportunities and hence good livelihood. In this process, the male with their wives and children migrate to the urban areas and get detached from the traditional existing rural health system and

become alien to the new place^{1,2}. They reside at construction sites or slums without any awareness of the existing health care services and no acquaintance with the health care workers of the new area due to hesitancy and lack of proper information which further makes them vulnerable^{4,5,6,7}. Interstate migrants may face an additional cultural and language barrier, thus, further hindering health seeking inclination among them. Also, the existing gaps between availability of basic amenities within the cities, particularly in the context of water and sanitation facilities, result in serious problems of health and hygiene.¹ In addition to this, the vicissitudes of availability of food, results in a constant threat of undernutrition among the children especially. Several studies have documented that the childhood immunization coverage rates were low among migrants^{6,7,8}. This amalgamation of growing risk factors can be a perfect recipe for the vicious cycle of infection and malnutrition. Hence this study was planned with the aim to understand the health of the migrant children living in Lucknow city.

Objectives

- To determine the immunization and nutritional status of the preschool migrant children
- To assess the environmental and living conditions of the migrant families.

MATERIALS & METHODS

Study Design and Setting: A community based cross sectional study was conducted among children aged 6– 59 months paired with mothers between 2020-2021. The study area was in Lucknow city.

Population and sampling: All randomly selected children 6-59 months of age paired with their mothers were the study population. Sample size was calculated with an expected prevalence of immigrants was 50% of, 95% confidence interval, 5% of margin of error and 10% of non-response rate. The total sample size calculates for this study was 400 recently delivered women.

Women having more than one child in the age group of 0-59 months, one child was randomly selected.

Data collection: A Structured questionnaire was used, and mothers were interviewed face to face. The questionnaire was pretested in 5% of the sample size in a community other than the study area and revised. The length of a child aged (6-23 months) was measured with a horizontal wooden length in recumbent position. The height of a child (24- 59 months) was measured with a vertical wooden height board while the child standing upright in the board. The length and height were measured nearest to the 0.1cm. Weight was measured using digital weight scale and read to the nearest 0.1kg.

Operational definitions

Migrants: are defined as population coming from rural areas of other districts and residing in urban area of Lucknow since past 06 months and 10 years.

Wasting: was computed when the weight-for-height z-score (WHZ) is below -2SD in the national guidelines⁹.

Severe wasting: was computed when the weight-for-height z-score (WHZ) is below -2SD in the national guidelines⁹.

Underweight was computed when the weight for age z-score (WAZ) is below -2SD in the national guidelines⁹.

Severe underweight: when the weight for age z-score (WAZ) is below -2SD in the national guidelines⁹.

Stunted: was computed when the weight for age z-score (HAZ) is below -2SD in the national guidelines.

STATISTICAL ANALYSIS

The data was analysed using SPSS version 24.0. Descriptive summary using frequencies, percentages, mean, and standard deviation have been used to present study results. Ethical clearance was taken from Institutional ethics board committee before commencing the study.

RESULT

Table 1 shows that majority of children in these settings were in the age group of 6-12 months (55.8%). It was seen that 45.4% migrated interstate and 56.7% migrated intrastate have been away from their native place for more than 5 years. Out of the total participants in the study, 71.5 % were

Hindu, 59.3% belonged to SC/ST and 40.8% belonged to OBC. Mean per capita income for interstate migrants and intrastate migrants was Rs.5383±2230 and Rs.4262±1605 respectively. In the interstate migrants' group, 83.1% of mothers were working while among the intrastate migrants, only 42.9% were working.

Table 1: Sociodemographic characteristics of the Migrant Mother and Child Dyad

Characteristics	Interstate Migrants (n=183)	Intrastate Migrants (n=217)	Total (N=400)
	No. (%)	No. (%)	No. (%)
Age Groups of the Child			
0-6 months	37 (20.2)	43 (19.8)	80 (20.0)
6-12 months	109 (59.6)	114 (52.5)	223 (55.8)
>12 months	37 (20.2)	60 (27.6)	97 (24.3)
Gender of the child			
Male	95(51.9)	127(58.5)	222(55.5)
Female	88(48.1)	90 (41.5)	178(44.5)
Birth order of the child			
1st	50 (27.3)	56 (25.8)	106 (20.5)
2nd	68 (37.2)	64 (29.5)	132 (33.0)
3rd	65 (35.5)	97 (44.7)	162 (40.5)
Mean Duration of migration			
<2 years	55 (30.1)	35 (16.1)	90 (22.5)
2-5 years	45 (24.6)	59 (27.2)	104 (26.0)
>5 years	83 (45.4)	123 (56.7)	206 (51.5)
Place of stay during first 6 months of age of child			
Native village	23 (12.6)	19 (8.8)	42 (10.5)
In the City	160 (87.4)	198 (91.2)	358 (89.5)
Both at native place as well as in the city	-	-	-
Type of current place of residence			
Notified Slum	36 (19.7)	56 (25.8)	92 (23.0)
Non notified slums	83 (45.4)	133 (61.3)	216 (54.0)
Constructions site	64 (35.0)	28 (12.9)	92 (23.0)
Mean age of mother (years)	24.4 ±4.2	25.4 ± 4.7	
Religion			
Hindu	94 (51.4)	192 (88.5)	286 (71.5)
Others	89 (48.6)	25 (11.5)	114 (28.5)
Caste			
SC/ST	68 (37.2)	169 (77.9)	237 (59.3)
OBC	115 (62.8)	48 (22.1)	163 (40.8)
Children less than five years of age in the household			
One child	78 (42.6)	117 (53.9)	195 (48.8)
Two Children	98 (53.6)	91 (41.9)	189 (47.3)
More than two children	7 (3.8)	9 (4.1)	16 (4.0)
Mean family size	4.5 ± 1.4	4.6 ±1.3	-
Mean per capita income per month	5383 ± 2230	4262 ± 1605	-
Working status of mothers			
Working for cash/Kind	152 (83.1)	93 (42.9)	245 (61.3)
Not working	31 (16.9)	124 (57.1)	155 (38.8)
Frequency of visiting Native place			
Once in three months	16 (8.7)	47 (21.7)	63 (15.8)
Once in six months	92 (50.3)	97 (44.7)	183 (57.3)
Yearly or more	75 (41)	73 (33.6)	148 (26.9)

Table 2 highlights that 98.4% of interstate and 95.4% of intrastate migrants do not have an immunization card of the child. Only 14.8% of the total children had fully immunized status appropriate to age. Merely 3.8% that was 7 participants were enrolled in an AWC (Anganwadi center) among the interstate migrant families. The

percentage registration for the same was relatively more for intrastate migrants (13.8%). Out of the total, 79.8% of the children under two years received colostrum. 84% of the total children under two years of age were exclusively breast fed for first six months.

Table 2: Immunization status, IYCF Practices and Enrolment of the Migrant Children in the AWC

Characteristics	Interstate migrants (n=183)	Intrastate Migrants(n=217)	Total (N=400)
	No. (%)	No. (%)	No. (%)
Availability of Immunization card			
Yes	0.3 (1.6)	10 (4.6)	13 (3.6)
No	180 (98.4)	207 (95.4)	387 (96.8)
Immunization status appropriate to age			
Full	23 (12.6)	36 (16.6)	59 (14.8)
Partial	58 (31.7)	66 (30.4)	124 (31.0)
None	102 (55.7)	115 (53.0)	217 (54.3)
Enrolment in AWC			
Yes	7 (3.8)	30 (13.8)	37 (9.3)
No	176 (96.2)	187 (86.2)	363 (90.8)
IYCF practices			
Children under two years of age BF within one hour of birth after	176 (94.0)	194 (89.4)	366 (91.6)
Children under two years of age to whom colostrum was given	149 (81.4)	170 (78.3)	319 (79.8)
Children under two years of age to whom were exclusively breast fed	157 (85.8)	179 (82.5)	336 (84.0)
Children under >6 months of age in whom CF was started before six months of age	-	-	-

Table 3 depicts the nutritional status of migrant workers. It was noted that among children of the interstate migrants, 31.7% were underweight and 25.7% had SAM while among children of the intrastate migrants 33.6% were underweight and 17.5% had SAM. Wasting was present in 40.0% children out of the total, while 33.1% of the total children were stunted. 21.4% children who had Bitot's spots were children of interstate migrants in comparison to only 4.8% belonging to intrastate migrants. When treatment seeking

behavior was compared, it was seen that half (50.8%) of the interstate migrants were choosing an unqualified person over government hospital or health facility. The utilization of government health facilities among them was as low as 2.2%. About 15.3% and 40.1% children were having fast breathing during the study in the interstate and intrastate migrants respectively. Ear discharge was seen in 20.2% of the interstate migrants' children and 12% of the intrastate migrants' children.

Table 3: Nutritional Status of the Migrant Children

Variables	Interstate migrants (n=183)	Intrastate Migrants (n=217)	Total (N=400)
	No. (%)	No. (%)	No. (%)
Weight for age			
Normal	78 (42.6)	106 (48.8)	184 (46.0)
Underweight	58 (31.7)	73 (33.6)	131 (32.8)
SAM	47 (25.7)	38 (17.5)	85 (21.3)
Height for Age			
Normal	128 (69.9)	139 (64.4)	267 (66.9)
Stunted	55 (30.1)	77 (35.6)	132 (33.1)
Wasting			
Absent	115 (62.8)	125 (57.6)	240 (60.0)
Present	68 (37.2)	92 (42.4)	160 (40.0)
Nutritional deficiency			
Pale conjunctiva	122 (66.7)	138 (63.6)	260 (65.0)
Flag sign	86 (47.0)	74 (34.1)	160 (40.0)
Bitot's Spot	3 (21.4)	1 (4.8)	4 (11.4)
Morbidity in last two weeks			
Diarrhea	137 (74.9)	171 (78.8)	308 (77.0)
Received ORS	44 (24.0)	64 (29.5)	108 (27.0)
Fever and cough	164 (89.6)	140 (64.5)	304 (76.0)
Fever (not associated with ARI)	77 (42.1)	126 (58.21)	50.8 (203)
Treatment seeking behavior			
Private practitioner	19 (10.4)	38 (17.5)	57 (14.3)
Unqualified person	93 (50.2)	70 (32.3)	163 (40.8)
Govt hospital /health facility	4 (2.2)	7 (3.2)	11 (2.8)
Indigenous system of medicine	48 (26.2)	83 (38.2)	131 (32.8)
Bought from Medical store	19 (10.4)	19 (8.8)	38 (9.5)
Knowledge about ORS	78 (42.6)	95 (43.8)	173 (43.3)
Fast breathing	28 (15.3)	87 (40.1)	115 (28.8)
Ear discharge	37 (20.2)	26 (12.0)	63 (15.8)

Table 4 represents living conditions of migrant workers. 73.2% of the interstate migrants and 84.3% of the intrastate migrants were living in a kutcha house. Only 2.5% of the total had two rooms in their house. 62.1% of the total migrants were still using wood or coal as cooking

fuel followed by 33.4% people who used kerosene as the same. A strikingly high percentage of 91.8% interstate and 90.8% intrastate migrants were still resorting to open field defecation. None of the houses had a separate kitchen. Only 15.8% of the total had access to electricity

Table 4: Environmental and Living Condition of the Migrants

	Interstate Migrants (n=183)	Intrastate Migrants (n=217)	Total (N=400)
Characteristics	No. (%)	No. (%)	No. (%)
Type of house			
Kutcha	134 (73.2)	184 (84.3)	317 (79.3)
Semi Kutcha/Pucca	49 (26.7)	34 (15.6)	78 (20.8)
Number of living rooms			
One	180 (98.4)	210 (96.8)	390 (97.5)
Two	3(1.6)	7(70)	10 (2.5)
Type of cooking fuel Used	N= 144	N= 149	N=293
Wood/Coal	87 (60.0)	95 (63.7)	182 (62.1)
Kerosene stove	51 (35.4)	47 (31.5)	98 (33.4)
Gas Stove	6 (4.1)	7 (4.6)	13 (4.4)
Type of toilet facility			
Shared toilet	10 (5.3)	15 (7.0)	25 (6.3)
Community toilet	5 (2.7)	5 (2.3)	10 (2.5)
Open field	168 (91.8)	197 (90.8)	365 (91.3)
Separate Kitchen	Separate kitchens are not present in any of the house.		
Presence of electricity	28 (15.3)	35 (16.1)	63 (15.8)

DISCUSSION

Migration of families to developed areas for better work opportunities and employment has led to huge displacement of the migrant children causing neglect in their wellbeing and making them vulnerable to poor health outcomes^{12,13}. The following study has evaluated the health profile of the interstate and intrastate migrant children so that better policy makers can formulate better strategies to ensure their wellbeing.

In the study by Kusuma Y.S. et.al. (2020)⁶, among recent and settled migrants in Delhi, India, it was highlighted that lack of awareness of the immunisation schedule and location of health facilities, mobility, illness of the child, fear of vaccines and side-effects were the main reasons for incomplete or no immunisation among children of migrant workers. This statement was congruent with rates of childhood immunisation coverage. They recorded only 31% of recent-migrant children and 53% of settled-migrant children were fully immunised against seven vaccine-preventable diseases (VPDs) by 12 months of age in capital of India.⁵ In comparison to

this, the present study it was seen that as low as 14.8% of the total children of interstate and intrastate migrants had fully immunized status appropriate to age. Singh S et.al. (2019)¹⁴ in their study revealed an important issue that most migrant workers being daily wagers have to leave for work resulting in non-availability of a caretaker to take the child to the immunization centre. They can get their child vaccinated on holidays or even weekends, however, immunization days are scheduled between Monday to Friday. Polio was an exception as most of the campaigns were held on Sunday or on holiday.¹⁴ This can be an important area of improvement as our study also showed wide lacunae of immunisation coverage. However, the full immunization coverage among the children of migrants was noted to be same as the general population of the State of Telangana (66.7%) in a study on immunization uptake and its determinants among the internal migrant population living in non-notified slums of Hyderabad city, India¹⁵. The covariates such as higher mother's education level and salaried occupation of the head of the

household, ANC visits by mother, place of delivery and a postnatal visit by health worker were also significantly associated with the full immunization against six VPDs.¹⁵ This figure is strikingly different from what is seen in our study highlighting a major State to State variation.

The added malady of poor nutrition among migrant workers was also assessed in our study. Amongst the children of the interstate migrants, 31.7% are underweight and 25.7% have SAM while in children of the intrastate migrants 33.6% are underweight and 17.5% have SAM and overall, 33.1% of the total children were stunted. The results were comparable to the inferences drawn by the study conducted by Dabar D et.al (2020)¹⁶ among the under-five children living in a migrant populated area of South Delhi. Prevalence of underweight and stunting were noted as 34.0% and 42.6%, respectively.¹² The data from National Family Health Survey 4 (NFHS-4)¹⁰ 2015–2016 that 35.7% children (<5 years) were underweight, 38.4% were stunted and 21% were wasted in the country further corroborates the findings.

CONCLUSION

The immunization and nutritional status of the migrant children was very low and poor. The living conditions of the migrant families was also below par. Health seeking behavior was also very poor among them. There is urgent need of effective health policies for the migrant children to ensure their well-being. Financial assistance and health insurance should be provided to the migrant families.

Declaration by Authors

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