

Original Article

Children bear the brunt of negligence of the unorganised sector: A study in brick-kilns of Hooghly District, West Bengal

Aparajita D¹, Sukesh D², Sudarsan M³

¹Professor and HOD, ²MD PGT(Community Medicine), ³Assistant Professor, Department of PSM, All India Institute of Hygiene & Public Health(AIIH&PH),Kolkata.

Abstract:

Background: Brickfields belong to the unorganised sector and the workers are neglected, living in utterly poor conditions. The objective of the study was to assess the problems of their children with special emphasis on their nutritional status and the morbidity pattern.

Methods: It was a cross-sectional, observational type of study on 86 children of up to 14 years of age belonging to three randomly selected brickfields of Singur Block(Hooghly District), West Bengal. The parents of the children were interviewed and clinical examination done on the children.

Results: Data were analysed using SPSS software 17.0 version and WHO AnthroPlus software. Forty nine (57%) children were malnourished. On examination and on previous two weeks recall it was observed that sixty six (77%) children had one or more morbidities. Pallor was the most common morbidity (70%), followed by ARI (18.6%) and diarrhoea (9.3%). School attendance was 12% and child labor was found in 20% children.

Conclusion: The children live in unimaginably poor conditions deprived of all basic amenities. Due attention must be given to these children regarding adequate social security and comprehensive health care.

Keywords: children of unorganized sector, morbidity profile, nutritional status.

Introduction:

Brick-making is a traditional industry in Bengal. With increasing urbanisation and construction of multistoried buildings, roadsetc the demand for bricks is ever-increasing. The Indian brick industry is the second largest in the world after China¹. In West Bengal brick-kilns are run by seasonal migrant labourers, coming from poor neighbouring states – Bihar, Jharkhand & Orissa etc². They form a part of the unorganised labour force, are poverty stricken, illiterate, with no sustainable livelihood options at their native villages². They migrate in semi-bonded conditions – receive advance (*Dadan*) from middlemen or labour-contractors (*Thikadar*) with obligation to work in brickfields³. They work for six to eight months (October to May) every year and go back to their native state³. The children of such parents are worst affected. They live without any amusement or recreation⁴. Many of them are child labourers, never attend school. Being migrants and non-conversant with local language (Bengali) as well as poverty inhibit them to go to school.

Lack of awareness about education in the family and poverty render them to earn from childhood, rather than going to school. They suffer from malnutrition, other health related problems. This study was aimed to find out the magnitude of the problems of these underprivileged children with special emphasis on their nutritional status and their morbidity pattern.

Methods:

Study Area: Brickfields of Singur Block, Hooghly District under the service area of Singur Rural Health Unit & Training Centre, All India Institute of Hygiene and Public Health, Kolkata.

Study Population: Children of up to 14 years age (ie children before 15th birthday) from three randomly selected brickfields namely GBW, Devi and Mahamaya.

Study Period: Six weeks (16th March –20th April 2011)

Sample Size:

For sample size calculation percentage of children of brickfields never enrolled in school in another study [5] ie 85% was taken as proportion(p). So applying $4pq/L^2$, where $p=.85$, $q=.15$, L =allowable error as 10% ie .1,

Address for Correspondence:

Sukesh Das, PGT, Department of PSM, AIIH&PH, Kolkata Assistant Professor, Department of PSM, AIIH&PH, Kolkata.
Email: drsukeshdas@gmail.com

minimum sample size calculated was 51. In this study 86 children were studied.

Sampling Design:

There were 26 brickfields under the Singur Block. Brickfields were selected one by one by simple random method. All the children of proposed age group at the selected brickfields were included in the study. Three brickfields consisting of 86 children, was the sample population.

Study Design:

It was an observational study. The parents of the children were interviewed with a pre-tested semi structured schedule in local language, after obtaining informed consent from the parents. They were also clinically examined. Observations were made regarding their living conditions, access to potable drinking water, utilisation of health care and provision of basic needs of life.

Study Tools and technique:

1. A pretested semi structured schedule in local language (Bengali).
 2. Weighing Machine.
 3. Infant meter/Stadiometer for measurement of length/height.
 4. Stethoscope for clinical examination.
- To assess malnutrition of the study population, BMI Z score (WHO) was used; for this weight and height/length were taken and classification done using WHO AnthroPlus software.

Results:

From the three brick-kilns 48 households had children upto 14 years of age and a total of 86 such children participated in the study.

Most of the children were migrants 71 (83%) were from Jharkhand and five (6%) were from Orissa. All their parents except one were illiterate.

Table 1: Socio-demographic profile of the Children (n=86)

Parameters	Frequency	%
Age(Yrs) (n=86)		
<=1	6	7
1—5	46	53.5
5—10	30	34.9
10—14	4	4.6
Sex (n=86)		
Male	38	44
Female	48	56
PCI(Rs) (n=86)		
250—499	56	65
500—749	27	31
750—999	3	4
Family size (n=48)		
1--3	35	73
=>4	13	27

It was observed that most (88.4%) of the children were between one and ten years of age. There were 44% males and 56% females. Median(IQR) value of Per capita monthly income was Rs 410(275-580) and most (96%) of the families had PCI of less than Rs 749. The family size (number of children) ranged from one to seven; 27% families had 4 or more children.

Table 2: Immunisation status, nutritional status and morbidity profile of the children

Profile of the children	Male No.(%)	Female No.(%)	Total No.(%)
Primary Immunisation status (n=80, age =>1yr)			
Fully immunised			
Partially immunised	1 (2.8)	1(2.3)	2(3)
Unimmunised	25(69.4)	33(75)	58(72)
Total	10(27.8)	10(22.7)	20(25)
	36(100)	44(100)	86(100)
Nutritional Status (n=86) according to BMI Zscore(WHO)			
Normal(2 to -2 Z score)	17(44.7)	20(41.6)	37(43)
Wasted(<-2 to -3 Zscore)	19(50)	25(52)	44(51)
Severely wasted(<-3 Z score)	2 (5.3)	3(6.4)	5(6)
Total wasted	21(55.3)*	28(58.4)*	49(57)
Morbidity profile(n=86)			
Pallor	21(55.3)**	39(81.2)**	60(70)
ARI	7(18.4)	9 (18.7)	16(18.6)
Diarrhea	3(7.9)	5 (10.4)	8(9.3)
Fever only	2(5.3)	1(2.1)	3(3.5)
Skin diseases(scabies,boils etc)	2 (5.3)	2(4.2)	4(5)
Vitamin deficiency signs/symptoms	2 (5.3)	3(6.2)	5(6)
Pain abdomen/worm infestations	1(2.6)	2(4.2)	3(3.5)
Injury	2 (5.3)	1(2.1)	3(3.5)
Earache	2(5.3)	0	2(2.3)
No morbidity	9 (23.7)	11(22.9)	20(23)

*Z=.289(ie<1.64). So the difference of malnutrition(wasting) between female and male children was statistically not significant at 5% level of significance.

**Z value=2.63 (ie>2.33). So the difference of pallor between female and male children was statistically significant at 1% level of significance.

Only two parents could provide the immunisation card of their children. According to information collected from the parents 20(25%) children were unimmunised and another 58(72%) children were partially immunised. Only 2(3%) children were fully immunised.

Forty nine(57%) children were malnourished(wasted), according to BMI Zscore(WHO) classification. Five (6%) children were severely wasted. Female children were more malnourished (58.4%) compared to male children (55.3%) though the difference was not statistically significant(Z=.289) at 5% level of significance.

On examination and on the previous two weeks recall it was observed that 66 (77%) out of the total of 86 children had one or more morbidities. ARI (18.6%) was the commonest disease followed by diarrhoea (9.3%) The "other" morbidities were pain abdomen, worm infestation, injuries and earache.

Clinically anaemia was detected with the presence of pallor which was the commonest morbidity. Thus 60(70%) of the children were anaemic, being more among the female children than the male children (81.2% vs 55.3%) and the difference was statistically significant at 1% level of significance ($Z=2.63$). Five children were found to have signs and symptoms of vitamin deficiency ie angular stomatitis(two), cheilosis(two) and Bitot's Spot(one). Out of the morbid children 36 (54.5%) were not aware of their morbid conditions like anaemia and other nutritional deficiencies and they did not seek advice from anywhere. Again those who were aware of their morbidity the health care seeking behaviour was poor.

Twenty-nine (44%) children were treated by quacks arranged by brickfield management. Only one child consulted private practitioner for a fractured limb. No children below six years attended the local Anganwadi Centre.

Out of the 34 children older than five years of age only four (12%) were found to attend formal school. The latter were from West Bengal, having the same mother tongue as the medium of instructions of the local schools. The rest 30(88%) children whose mothertongue was different(Hindi/Oriya) did not attend school. In this study seventeen (20%) children were found to be child labourers.

Table3: General Observations regarding Housing, Environment and other Living Conditions of the Children

SI No	Items	Remarks
1	Housing	Temporary mud huts covered with plastics or tarpaulin with no ventilation at all. Only one main entrance often without a door and so low that one has to literally crawl in. Darkness, overcrowding, rodent infestation and unhygienic conditions overshadow the inside of these shanties.
2	Kitchen	Outside the huts vulnerable to the surrounding dirt and dust.
3	Waste Disposal	Indiscriminate throwing all around inviting flies and rodents. There is no drainage system.
4	Environment	Utterly unhygienic condition.
5	Drinking Water	A shallow tube well shared by all the families.
6	Water for other purposes	Usually a nearby pond.
7	Site for defecation	Open air field with no footwear.

Table 3 clearly depicts the horrible and inhuman conditions in which these children live along with their parents. Thus they were found to live in overcrowded, poorly ventilated and unhealthy make-shift huts. They had no latrines and therefore they practised open air defecation. Their personal, domiciliary and environmental hygiene were of very poor quality. Apparently, there were too many determinants and risk factors for both communicable and non-communicable diseases among this population.

Discussion:

In this study most of the children were from poor neighbouring states –Jharkhand and Orissa. Similar finding was also observed in a report on brick-kilns of Howrah District⁴.

District Project Office, Sarva Siksha Mission, Bardhaman reported large family size of brickfield workers, all of the children have family size of four or more⁵. But in this study 27% children were found to have family size of four or more.

The Universal Immunisation Programme is a programme for which West Bengal boasts of since it is one of the leading states with high success rate. But the poor immunisation status of the children in this study shows the ignorance and apathy of the parents regarding importance of vaccination. They said that they could not spare the time required for immunising their children as well as taking care of them in case of any ill health following vaccination.

According to NFHS-3, 45.9% children below three years were undernourished in India; in West Bengal it was 39%. Under nutrition was higher among girls (50%) than among boys (41.9 %)⁶. In this study the gravity of the situation is reflected by the fact that 57% of the children were undernourished while pallor was detected in 70% children (more than 80% of girls). This was also consistent with NFHS-3 finding of prevalence of 70% anaemia among six to 59 months old children⁶. They were practising open air defecation with bare feet and therefore beyond nutritional anaemia hookworm anaemia might be an important cause of anaemia.

For the various morbidities like ARI, diarrhoea etc the Government health facility was not utilised by them at all. Though two Health Centres under AIH&PH, Kolkata were there they were not accessible to them due to long distance and poor transport facilities. Moreover the OPD hours coincided with the parents' working hours and the latter were reluctant to lose their daily wage. They claimed that there were no domiciliary visits by the local health personnel like health worker, Anganwadi worker or ASHA. Their temporary stay, their filthy surroundings and their propensity to stay clustered and disinclination to open up to the outside world may be the reasons why the health personnel showed no interest in them.

In this study only 12% children whose mother tongue was Bengali were found to attend school. Out of the non-goers 29% children had never been enrolled in school, the rest 71% were enrolled in their native villages but dropped out. Their long absence due to migration and different native language than the local schools were responsible for non-enrolment in schools. Similarly it was observed in another study that 85% migrant children had never been enrolled, while 15% were enrolled but had dropped out because of their migration⁵.

According to NFHS-3 finding of 33% children received any service from ICDS with 26% children getting supplementary feeding [6], but here not a single child below 6 years made avail of ICDS services.

The poverty, debt-advance system of payment of contract workers of brickfields force them to earn more and engage their children at the work⁴. It was observed in another study that more than 75 per cent of the migrated children aged 10-14 were working alongside their parents in the Brickfields⁴. In this study 20% children were working in brickfields according to the parents' statement. This difference might be due to

false information received from the parents of the present study.

Conclusion:

In this study the pathetic picture of the children of brick field workers has been reflected. It was evident that these children were neglected by their parents, by brickfield management and also by local authorities responsible for their health care and education. This lackadaisical attitude of all the stakeholders responsible for their welfare is a matter of concern and should be an eye-opener for the policy makers to rope in some sort of social security and minimum healthcare for these children. Further similar, more intensive and extensive research to elicit the condition of labourers of other such unorganised sector is the need of the hour.

References:

1. <http://www.demotix.com/news/242762/migrant-labour-workers-brick-kiln-india>. [Online]. 2010 [cited 2011 Aug 20].
2. Save the Children India. Freedom From Hunger For Children Under Six: An Outline for Save the Children and Civil Society Involvement in Childhood Undernutrition in India. April 2009
3. Ghosh S. Fragmented labour and elusive solidarity: The brickfields of Bengal. Available from: www.mcrg.ac.in/T_C_Conference/swati.doc [Online]. [cited 2011 Sep 21].
4. Tomorrows Foundation. Mapping exercise: Mapping of seasonally migrating children to the brick kilns of Shyampur I & II blocks of Howrah, West Bengal. Available from: <http://www.tomorrowsfoundation.org/other-reports/mapping-seasonal-migration-of-children-howrah-west-bengal.pdf>. [Online]. [cited 2012 Jan 10].
5. Research & Evaluation Cell, District Project Office, Sarva Siksha Mission, Bardhaman. A Report: Socio-economic and educational condition of children in brickfield areas. Available from: http://bardhaman.nic.in/education/ssa/study_07.pdf. [Online]. [cited 2012 Feb 21].
6. National Family Health Survey (NFHS-3) 2005-2006. Key Findings. Ministry of Health and Family Welfare, Available from: <http://mohfw.nic.in/NFHS-3%20Nutritional%20Status%20of%20Children.ppt>. [online]. [cited 2012 Jan 20].