

Original Article

Morbidity profile of Brick Kiln workers around Ahmedabad city, Gujarat

Dr. Rajesh Mehta¹, Dr. Niraj Pandit², Dr. Reena Parmar

¹Professor, Department of Community Medicine, College of Medical Science Amargardh, Bhavnagar

²Associate Professor, Department of Community Medicine, S. B. K. S. & M.I.R.C. Piparia, Vadodara

Corresponding Author: Dr. Rajesh Mehta Email- rajeshforhealth@gmail.com

Abstract

Brick workers are known for poor health and poor access to health care. They are prone to specialized group of diseases. The present study was undertaken with objective to study the morbidity pattern among brick workers working around Ahmedabad city. It was a cross-sectional study. There were 2545 brick kiln's workers examined for various morbidities. They have one or more morbidity during examination. The musculoskeletal symptoms, respiratory and digestive system related symptoms were the major morbidity. There were other illness also observed, they were fever, malnutrition and skin diseases. The majority of workers were in age group of 15-44 years age group. The limitation of study was that it is the camp based approach. There is need to plan community based house to house study among brick workers.

Keywords: Brick kiln worker, morbidity, camp approach,

Introduction

Brick is a very important building material for a developing country, especially like India to improve infrastructure. The majority of new buildings use bricks, and construction is the symbol of improvement in the urban sector. However, the reality is that people, who work with this rough material, will never be able to own a development themselves; sometimes they don't even have enough money for a meal. They earn money on the amount of bricks they shift, rather than hourly, which encourages them to work from dawn till dusk; the workers are treated as machines as the more the labourers¹. The Indian brick industry is the second largest in the world after China, employing large numbers of migrant workers including men, women and even children². Most of the labourers of the brick field come from the tribal area. In Gujarat also the picture is same that majority of brick workers are coming

from tribal areas to work near by cities in brick industry. Ahmedabad is the upcoming metro city of Gujarat. The city is the one of main important economic as well as culture center of Gujarat. There are lots of brick making units around the city.

The brick kiln’s workers are living in poor environment near to brick making units. They have poor access to the health care. They are at risk to various types of illnesses. It is very surprising that the first response on falling ill is to come back home. Thus the outcome is loss of job and the earning. Work related illnesses are very common. The present study was under taken to find out the morbidity pattern among the brick kiln’s workers.

Methods

The study was conducted in and around city Ahmedabad. It was estimated that around 50000 brick kiln’s workers working in area. It was decided to include 5% of workers to examine for present study. It was a cross-sectional study. The series of health check up camps, at multiple location around city Ahmedabad, were organized to encourage morbid people to attend health services. The doctors with supportive staff had conducted health camp near by brick industry. The workers were asked to attend camp and take diagnostic and treatment services. The pre-tested questionnaire was used to collect morbidity information. The doctor has been asked to take at least 10 minutes for examination and treatment, whenever possible health education was also imparted for prevention of minor elements. This paper intends to provide the morbidity profile of brick kiln workers based on the analysis of case paper.

Thus the team of doctor, case recorder, trained person for medicine with driver had conducted series of camp for data collection in the month of February – March 2009. Thus collected information was entered in Excel sheet and analyzed with the help of EpiInfo software for morbidity pattern.

Results

A total of 2545 patients were examined during study period. The sex distribution of workers is shown in table -1.

Table – 1 Sex wise distribution of Brick worker (patients).

Sex	Frequency	%
Male	1545	60.7
Female	984	38.7
Not recorded	16	0.6
Total	2545	100

Majority of the patients were male (61 %) compare to female (39 %). This may be because of less proportion of female workers or lack of female doctor in some of the camps.

Table – 2 Age wise distribution of patients who attended camp

Age in yrs	Percent
0- 1	4.8 %
1-5	12.1 %
6 – 14	12.1 %
15-29	29.6%
30-44	29.1%
45-59	8.6%
60-74	3.3%
75-90	0.4%

Almost 88 % of patients were young – less than 45 years of age. Out of total patients 29 % patients were children below the age of 15 years.

Out of total 2545 patients, examined 14.9 % had minimal complaint or no complaint & hence they are grouped under others. Where it was not possible to interpret the illness they are also grouped under the others.

Although there were multiple complaint per patient in many cases, for simplicity of analysis we have considered only more significant one, which brings the patients to doctor. Also it was a camp approach and denominator is not available, the morbidity is expressed as proportions.

Mainly 3 type of morbidity was observed in study population. They were musculoskeletal disorders, respiratory disorders and digestive disorders. Their contribution was more than 50 % of morbidity. (See table -3)

Musculoskeletal system (19.6 % + 5.3 % Bodyache) = 24.9 %

Respiratory System = 17.1 % &

Digestive system = 12.7 % .

Table – 3 Distribution according of Morbidity	Frequency	Percent
Respiratory	435	17.1%
Body ache	135	5.3%
Musculoskeletal	499	19.6%
Digestive	324	12.7%
Dental	29	1.1%
Fever	166	6.5%
Ear	36	1.4%
Malnutrition	119	4.7%
Eye	37	1.5%

Others	379	14.9%
Skin	141	5.5%
Weakness	65	2.6%
Headache	35	1.4%
Injury	27	1.1%
Endocrine	2	0.1%
Bleeding	5	0.2%
Nervous	20	0.8%
Infections	12	0.5%
Pica	20	0.8%
Reproductive	5	0.2%
Circulatory	14	0.6%
Gynec disorder	6	0.2%
STDs	1	0.0%
Surgical	16	0.6%
urinary system	17	0.7%
Total	2545	100.0%

All these problems are preventable mainly by using knowledge of ergonomics, providing safe drinking water and use of face mask with reduction of air pollution by engineering methods.

Respiratory system includes cough, cold, TB, asthma & other cases. Digestive system includes acid-peptic disease, diarrhea and pain in abdomen & worm infestations. Musculoskeletal system included backache, joint pain, pain in lower limb, body ache etc.

Although according to analysis malnutrition is seen as only 4.7 %. Other significant illnesses which were seen includes Fever (Respiratory infections & Malaria), skin disorders (Abscess, boils, scabies, dermatitis itching etc), Injury, surgical cases, conjunctivitis, bleeding problems, Urinary stone & urinary infection, ear infection, dental problems etc. Few cases suggestive of STD & Gynec disorder requires further exploration to really rule out or confirm cases of STDs.

Out of 2545 patients 3.5 % (88 patients) were referred for specialist care. Referral places were community health centers and near by medical college affiliated institutions.

Discussion

Almost 88 % of patients were young – less than 45 years of age. Out of total patients 29 % patients were children below the age of 15 years. This suggests that children are also in need of health care. Of course we do not know at present the denominator i.e. age wise break up of population comprising of families of brick kiln workers.

Respiratory system, musculoskeletal and digestive system related symptoms were the major morbidity among study population. Joshi SK³ from Nepal has also observed that

respiratory discomfort was the major morbidity among brick kiln workers. Thus there is high morbidity among the brick workers. But the limitation of study is that it is the camp based data collection. There is need to make systematic community based cross sectional study to understand the actual morbidity rate among brick workers.

References:

1. <http://www.demotix.com/news/201294/india-environment> accessed on Aug 2010
2. <http://www.demotix.com/news/242762/migrant-labour-workers-brick-kiln-india> accessed on Aug 2010
3. Joshi SK, Dudani I; Environmental health effects of brick kilns in Kathmandu valley; Kathmandu University Medical Journal (2008), Vol. 6, No. 1, Issue 21, 3-11

Acknowledgment

The author acknowledge the help of Peoples Health and Development trust for manpower supply, Kesar SAL Medical college, Ahmedabad and C. U. Shah medical College for deputation of internee doctors for project. The source of funding is from Prays Organization.