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Socio-economic Condition of Brick Kiln workers in Ahmednagar District, Maharashtra

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Abstract---A research on brick kiln workers was conducted in Ahmednagar district of Maharashtra to understand their general status. In all 120 workers were interviewed and their information was obtained by adapting the schedule of questionnaire. It is found that, the general status of brick kiln workers is not good. It is concluded that, the low income level of the workers leads to their substandard living. Malnutrition, addiction and low levels of education are the common problems among the workers. Provision of technical assistance, strengthening of infrastructural facilities and improvement of their income levels may enhance the general status of brick kiln workers.

Keywords---Migration, Economic Condition, Living Standard, Industry, Poverty.

Introduction

The word 'brick' was originated from late middle English from middle low German, Middle Dutch 'bricke', probably; reinforced by old French 'brique', of unknown origin or 'briquette', which means a block of compressed coal dust or peat used as fuel (Kahkonen and Lintukangas, 2012). In India, the history of making bricks is almost 5,000 years old which is as old as the earliest known Indian civilization "Indus Valley Civilization". It is actually owing to the discovery of Indus Valley Civilization. The people of that civilization extensively used bricks to lay complex mathematically planned cities (Thirupati, T. and Anthonisamy M. 2015). Indian brick industry is the second largest producer of brick in the world after China. India is estimated to produce more than 14,000 crores of bricks annually, mainly by adopting age-old manual traditional processes. The brick sector consumes more than 24 million tons of coal annual along with huge quantity of biomass fuel (Corporation Bank, 2010, cited from de, et al., 2013). Bricks are an indispensable component of each and every construction activity. These are made of clay and other minerals that are processed into a workable consistency, formed to standard sizes and fixed in a kiln to make them strong, durable and attractive.

Bricks are inexpensive building materials. Their low cost and structural versatility have led to their wide use for walls, floors, pavements and other structures. Because of the basic characteristics of the industry, brick kilns are always observed to be located on the outskirts of cities and towns or near places of construction activity. As the production and processing in the industry has to be done in the open, its continuance depends on climatic conditions. The work being sensitive to rainfall, the industry stops functioning during the rainy season and is therefore, seasonal in nature. Although the brick industry is several thousand years old, even today it is highly labor intensive. So far as India is concerned, the industry mostly depends on the rural migrant labor (John, J. and Nasir Ateeq, 1998). Brick industry in India still remains unorganized and no official authentic data is available regarding its status (Khan, I. and More, Rajan, 2015).

India's brick sector is characterized by traditional firing technologies; environmental pollution; reliance on manual labor and low mechanization rate; dominance of small-scale brick kilns with limited financial, technical and managerial capacity; dominance of single raw material (clay) and product (solid clay brick); and lack of institutional capacity for the development of the sector (A Shakti Sustainable Energy Foundation and Climate Works Foundation 2012). The brick kilns serve as a source of livelihood for thousands of unskilled laborers from across the country and from the neighboring country, Bangladesh. The seasonal nature of the work attracts migrant's labor, many of them landless farmers (Cheeruvarti, S. 2006). Brick workers are known for poor health and poor access to health care. 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 (Mehta, R. 2010). Though, the brick industry in India is one of the oldest industries, and many scholars and researchers have stated the problems of brick kiln workers in India, there has been a little improvement in the living stand of brick kiln workers in India. It has, therefore, become necessary to study the general status of brick kiln workers. The findings of the study would help draw attention of policy makers and other stake holders to take necessary steps for the necessary involvement required.

Study Area

Ahmednagar, the largest district in terms of geographical area in Maharashtra, located in the mid-western part of the state is selected for the present study. It extends between 18° 2' N -19° 9' N latitudes and 73° 9' E - 75° 5' E longitudes. The total Geographical area covered by the district is 17, 410.91 sq. km. and it is divided into Godavari and Bhima river basins. The northern part of the district is occupied by Godavari river basin while, the southern part is occupied by the Bhima river basin. Physiographically the district is positioned on the Deccan Traps with north-south stretching ranges of Western Ghat in the west. Climate of the district is hot and dry, on whole, extremely genial and is distinguished by a hot summer and general dryness during part of the year except during the season of south-west monsoon. On an average, the annual rainfall of the district is 501.8 mm. May is the hottest while; December is the coldest month of the year. The district belongs to the Nasik Administrative division of the state, and is

surrounded by the districts of Nasik, Aurangabad, Beed, Osmanabad, Solapur, Pune and Thane. The district comprises of 14 tahsil's, of which 13 are located in the low rainfall receiving drought prone area of the state.

Methodology

At least one brick kiln site from each of the tahsil's is selected and by using proportionate random sampling method, 120 brick kiln workers from 23 brick kiln workers were interviewed. Data was composed from the workers using a well structured and pretested questionnaire schedule. Interview of workers and brick kiln owner were also conducted. Empirical observations are also made in view of obtaining the required information. Statistical techniques viz. mean percentage and frequency were used to arrive at the consequential conclusion.

Results and Discussion

Pattern of migration

Brick kiln workers in the district are of two types' viz. native and those who are migrated from other states of India. It is found that, the majority of workers 76 (63%) were migrants from Madhya Pradesh, Uttar Pradesh, Bihar and Karnataka. They have reached in the district through labor contractors. The study also shows that, some of them are reached of their own or with the help of their family members. High wage rate in the study area is one of the major pull factors responsible for the immigration of workers in the district. December to May is the six months brick making season in India. During the period from December to February, temperature goes down in the northern part of Uttar Pradesh and Bihar and it creates adverse condition to the works involved in the brick making activity.

Food and health

Table 3
Distribution of workers according to their health problem

Health Problem (Multiple response)	Number of workers (n=120) (%)
Respiratory Problem	12 (10%)
Musculoskeletal	19 (16%)
Weakness	35 (29%)
Other (skin, eye, ENT etc.)	17 (14%)
None	37 (31%)

The nutrition knowledge assessment of the workers shows that, they have poor nutrition knowledge. Thus, they are not food and health cautious. Poverty and inaccessibility to public distribution system, particularly in cases of migrant workers, does not allow them to spend a sufficient amount on food. Though the workers in the brick fields are combination of local and migrants, their dilatory habits are almost same. The workers eat maize, rice, wheat, pulses and vegetables. Their diet is not balanced. It is found that, in all 69 (58%) workers are vegetarian. Milk and meat are found rarely in their diet.

Brick making is an accident-prone work. In addition, there are many other occupational hazards related with this work. Inhaling of smoke released from firing of kilns and dust particles emerged from the soil, carrying of brick for long hours create certain health issues among the workers. Though, there is a risk of accidents, workers, because of their poor economic background does not afford the cost of premium of health insurance. Workers are not having easy access to health care. Thus, they have to spend a considerable amount of their earnings for medical treatment. In all 61% and 52% workers were complaining the problem of backache and headache respectively. This can be explained by the fact that these workers have to carry brick for a long time and thus, suffer from the problem of backache. As they are exposed to gases like carbon monoxide they suffer from headache. Due to their poor economic conditions, the workers cannot buy a sufficient quantity of good quality food. Thus, majority of them, particularly women and children are malnourished.

Water

Though, potable water is one of the basic needs of human being, it was found that, only native workers were having water connection at their houses. While, workers those who reside at the site of brick kiln, dug wells, public tanks, hand pumps and bore wells are the source of water for them. In northern part of the district, ground water has become saline due to over irrigation. Workers' particularly in southern part of the district describe their source of water as being far away. Thus, it clears that majority of the migrants are experiencing hardship due to uncertainty of drinking water sources.

Housing

So far as housing is concern, the brick kiln workers live in temporary houses built at brick kiln sites. These small houses made up of brick walls with a tin sheet roof at a height of only 8 feet and a room space of 50 to 60 sq. feet. These houses do not offer adequate protection to the workers or their property. Lack of space in the house makes the houses insufficient for living. Houses are not proved with the basic facilities like bathrooms and toilets. Altogether 26 respondents were found living with no electricity connection in their houses. Inadequate ventilation and smoke of brick kilns create unhygienic conditions.

Demographic Characteristics

Table 2
Demographic characteristics of the brick workers

Age	Number of workers (n=120) (%)
> 33 years	23 (19%)
28-33	32 (27%)
23-28	48 (40%)
18-23	17 (14%)
<i>Gender</i>	
78 (65%)	Male
42 (35%)	Female

Education

Illiterate	26 (22%)
Primary	34 (28%)
High school	22 (18%)
H.S.C. and above	6 (5%)

Out of 120 interviewed brick kiln workers, 78 (65%) were male and 42 (35%) were female. Ages of these respondents ranged between 18 and 43. Most 48 (40%) workers were aged between 23-28 years, 32 (27%) were found between 28- 33 years, 23 (19%) were having their age more than 33 years while rest 17 (14%) were having their age between 18-23 years. In all 79 (66%) of the workers were married. Majority 76 (63%) of the workers are migrants. Every year, they work here for 6 months and then go back to their native places.

Economic Condition

Brick kiln workers are unorganized and they often change their place of work and employer. They are unskilled and poorly educated. They are temporary workers and do not have their labor union to raise their demands. Thus, they have to suffer from low wage rate. It is hardly possible for them to meet their daily needs with the meager income.

Education

The educational status of the workers was found very poor. Altogether 26 (22%) workers of them were not even enrolled in the school. Most 56 (47%) were not completed their education up to tenth standard. Out of them 22 (18%) have complete their education up to high school level and 34 (28%) have completed up to primary level. Only 6 (5%) of them have passed the examination of secondary school certificate and above. It was also found that the percentage of female literacy was very low (32%). Nonetheless, mainly the alarming fact was, the children of school going age were underprivileged of education and as an alternative were helping their families for economical support.

Addiction

Table 2
Distribution of workers according to addiction

Tobacco and tobacco products Chewing	Number of workers (n=120) (%)
Yes	93 (78%)
No	27 (22%)
Smoking	
Yes	31 (26%)
No	89 (74%)
Alcohol	
Yes	43 (36%)
No	77 (64%)
Reasons for addiction	
To relax mind	21 (18%)

To work at fast pace	16 (13%)
Family problem	29 (24%)
Peer pressure	11 (9%)
Cannot answer	31 (26%)
None	12 (10%)

Most 93 (78%) workers answered that; they chewed tobacco and tobacco products. In all 89 (74%) of the workers replied they never smoked, While 43 (36%) men were found to consume alcohol. Smoking and drinking liquor was not found among women. For the purpose of relaxation of mind, to work at fast pace, due to family problem and peer pressure these are the common causes of addiction found among the workers. Altogether 31 (26%) of the workers could not give the reason of their addiction.

Energy use

Since the per capita energy consumption is one of the important criteria adopted to understand the standard of living, an attempt has been made in this study to know the level of energy use by the workers. The study revealed that, due to the low purchasing capacity, workers do not afford auto vehicles and electric appliances in their houses. Thus, the per capita energy consumption is low.

Conclusion

The study reveals that, though the brick industry is one of the labor intensive industries, workers involved in this industry play an important role in the construction industry, it is because of meager income, and they are deprived of basic needs. Most of these poverty ridden workers are malnourished and addict to the tobacco and alcohol. They face certain health problems. They face various poverty driven problems like lack of education and low standard of living. Special attention given towards these workers would result in their overall development. Empowerment of these workers, particularly women may improve their status in the society.

Recommendations

As the living standard of brick kiln workers is poor, it is recommended that, the concern authorities and other stakeholders must pay a special attention to improve upon their economic condition so that, the workers can cope up with their health and other problems. Technical assistance for brick making may reduce the labor of these workers and enhance their working capacity. Coal with high amount of ash and sulphur being used as a fuel should be avoided to reduce the problem of air pollution. Workers must be provided with the health facilities and protection of life insurance. Improve the condition of workers houses by ensuring basic facilities like electric supply, safe drinking water,

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