

Condition of Construction Workers: Empirical Evidence from Gandhinagar City of Gujarat

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Abstract

In developing countries, construction provides much needed work opportunities for some of the poorest and most marginalized sections of society. In India it is estimated that up to 30 per cent of the construction workforce are women. They are integrated into the building workforce at the bottom end of the industry, as unskilled workers or head-load carriers. The proportion of unskilled workers in the total construction workforce is reasonably higher. In this industry, demand-supply of workers is managed through the contract system. Contractor and sub-contractor provide all facilities and instructions to the workers during construction work. In many respect, working and living conditions of construction workers are very different from the other workers due to the migratory nature of work. This study focused on Gandhinagar city, capital of Gujarat. The study based on primary data collected through stratified random sampling and observation techniques. From the analysis of the data collected it is clear that the working and living condition of workers in construction sector is not up to the mark as the entire surroundings are unhygienic. Because of the migratory nature of work most of the construction workers lives in temporary shelters built on the construction site.

Key Words

Construction Workers, Working condition, Living Condition, Gandhinagar.

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Introduction

The construction sector is one of the largest contributors to Gross Domestic Product (GDP) in India. According to Planning Commission¹, construction accounted for 8 per cent of the nation's GDP (at constant prices) in the last five years (2006-07 to 2010-11). In terms of employment, the construction sector is the second largest next to agriculture, is also principle part of the unorganized sector. According to the Planning Commission² report there is steady rise in the number of workers normally employed in construction from 1.45 crore in 1995 to 3.15 crore in 2005, wherein 2.56 crores were unskilled workers. Further, 4.1 crores in 2011, and is projected to generate 9.2 crores by 2022. Thus almost 5 crores additional jobs may be created in construction sector in the next 10 years. All evidence suggests that the industry has been the fastest growing in terms of employment of unskilled workers .

Gujarat state has a pride place in the Indian economy. The growth rate of 8.4 per cent in the Gross State Domestic Production (GSDP) during 2010-11 has been achieved due to high growth in real estate & business services (10.4 per cent) and construction (8.0 per cent) in the state (Socio-Economic Review, Gujarat State, 2011-12). In terms of employment, total number of workers in Gujarat state were 41 per cent (2, 47, 67, 747) of total population wherein 44.9 per cent male and 35.7 per cent female workers in 2011 (Directorate of Census Operations, Gujarat State). According to Self Employed Women Association (SEWA)³, there were around 5,00,000 construction workers in Gujarat State in 2000. Further, there were around 12, 00,000 construction workers in Gujarat state in 2012 (Times of India⁴: May 22, 2012). Thus, there is around 7, 00,000 employment has been created in the first decade of 21th century.

Though the construction sector is regarded as part of the unorganized sector, it must be remembered that a great deal of the construction work is undertaken by organized sector, including government departments, public sector undertakings and industrial and commercial establishments in the private sector, all of them are indirectly responsible for the appalling conditions of construction workers. Of course, they wash their hands of the responsibility by handing over the construction work to contractors. Gandhinagar city, the capital of Gujarat, the newly municipal city of Gujarat is also passing through huge government construction work.

¹ Government of India: N.D., 'Planning Commission: Twelve Five Year Plan (2007-12) Economic Sectors, New Delhi.

² Government of India: N.D., 'Planning Commission: Twelve Five Year Plan (2007-12) Economic Sectors, New Delhi.

³ SEWA Academy: (2000), "Labouring Brick by Brick: A Study of Construction Workers", Self Employed Women Association, Ahmedabad, Gujarat.

⁴ The Times of India: May 22, 2012, "Modi Eyes on 12 Lakhs Labourers", Ahmedabad, Gujarat.

Literature Review

The construction industry is one the most significant industries in the country and are closely related to other industries. It is one among the labour intensive industries. In the recent years a series of studies is on the informal economy and nature and livelihoods of the workers in this sector. Dileep M. Kumar (2011) explored the social and health problem in Pune, Maharashtra. Come up with the finding that about 72 per cent of the companies do not pay medical cost incurred to the Labourers. The health condition of the workers was very pathetic. Most of the studies focused on the economic wellbeing of the workers in this sector as I. S. Singh (1996), Shikha Singh (2012) and S. N. Guha Thakurta (1972), by studying in different parts of India come with nearly similar findings like low wage rate even below the minimum wage rate, difference in wages among male and female. Whereas, Muthuraja (2011) refuses the gender inequality in brick making industry. The study suggested that work in brick industry is facing lesser degrees of gender inequality and better prospects for women's economic participation. While some of the studies focus on the challenge of child labour in this sector as Ruma Ghosh (2004) capture the child labour process and employer-employee relationships in the brick industry of Noida. A major concern of the brick labours was the wage rate was fixed for their work. Taking the above studies into consideration the present study will focus on evaluating the socio-economic status of workers and working condition & living standards of construction labourers in the context of Gandhinagar, Gujarat.

Objectives

1. To analyse the working and living conditions of construction workers.
2. To access the challenges and problems faced by them.

Methodology

A field survey was conducted in the Gandhinagar city in the month of July and August 2012, Gandhiangar city is one of the fastest growing urban city of Gujarat state; the primary data has been collected from 100 respondents who are working in various building construction sectors. The data was collected by indepth interview and observation method (some time participant observation & non participant observation). The respondents were selected on the basis of the stratified random method. The major sources of secondary data are different published and unpublished data taken from Planning Commission-2012, Directorate of Census Operations-2011, Gujarat Infrastructure Development Board-2012, published and unpublished documents of Government of India as well as Gujarat, SEWA research papers, news papers, published books, articles, and online information etc. For data analysis simple/appropriate statistical techniques i.e. percentage, mean, standard Deviation etc. have been used.

Role of Contractor and Sub-contractor in the Workers Life

Contractor and Sub-contractor play a significant role in construction industry. Out of total respondents, more than 91 per cent construction workers received employment through Contractor and Sub-contractor (popularly known as “bandhkamono thekedar” in Gujarati). They manage demand-supply of workers as well as they are responsible to provide all facilities for them during construction work. The entry and existence of the workers are free and easy, for almost all categories of workers.

The construction sector has been a vast labour intensive industry with a high proportion of unskilled workers. The employment of female workers was totally confined to the unskilled category. This category of unskilled workers was the most vulnerable section of the workers in building and construction establishments. Information of occupational category of construction worker is exhibited in table no 1 It is clear from the table no 1 that majority of workers, i.e. 68 per cent belongs to unskilled workforce wherein 24 per cent were female and remaining 44 per cent were male construction workers in Gandhinagar. They were carrying bricks, cement, sand, water, digging earth, mixing cement, breaking stones, roofers, stone crushers, brick makers, painter, etc., followed by semi- skilled workers such as mason/masonry work, which were 13 per cent of total wherein 12 per cent were male and only 1 per cent was female masonry. Similarly, 5 per cent male workers were engaged in carpenter work.

Table no. 1: Occupational Profile of Construction Worker (in Per cent)

	Occupations	Gender		Total
		Male	Female	
1.	Mason/Masonry	12 per cent	1 per cent	13 per cent
2.	Electrician	2 per cent	0	2 per cent
3.	Tiles &Mosaic	2 per cent	0	2 per cent
4.	Un-Skilled Worker	44 per cent	24 per cent	68 per cent
5.	Carpenter	5 per cent	0	5 per cent
6.	Others	8 per cent	0	8 per cent
7.	Painter	2 per cent	0	2 per cent
Total		75 per cent	25 per cent	100 per cent

Source: Primary Survey: 2012

Again, 2.2 per cent male workers were engaged in electrician, painter, and tile & mosaic work respectively. Remaining 8 per cent were engaged in other work (such as Stone Machine driver/ Damper Driver, clerical, engineer and managerial work) in the Gandhinagar's construction industry.

During participant observation (while collection of data) it has found that a large number of construction workers mention that they use to purchase food items daily. Food is simple and unnourished due to limited means. Simple meals consist mainly of roti and either dal or a vegetable cooked either curried or dry. Most of them eat three times a day. For cooking most of them depend on forest while other use some other means.

The majority of construction worker families were using firewood for preparing food. Out of total, 85 per cent construction workers families used firewood. Remaining 15 per cent used gas for preparing food in the city. There is no kitchen room at all. In most construction site, living room is used for cooking during rainy season. There is very little space in the houses. Most of the dwelling were humid and smelt bad because there was no exposure to sunlight and lack of proper ventilation in room.

Accommodation and Sanitation Facility

An accommodation facility for construction workers was provided by the contractor either free or on rent. The study reveals that 81 per cent construction workers had stated that contractor/owner provided dwelling and paid accommodation during construction work, remaining 19 per cent had self-owned arrangement during construction work. Information of accommodation is revealed in the table no 2 reveals that most of the workers live in temporary built houses on the construction site i.e. 62 per cent lived beside the construction site.

Table No. 2 Status of Accommodation Facilities to the Workers

Sr. No	Accommodation Facility	Total
1	Own Shelter	17 per cent
2	Rent Shelter	9 per cent
3	Beside the Construction Site	62 per cent
4	On Construction Site	12 per cent
	Total	100 per cent

Source: Primary Survey: 2012

On the whole, nearly three-fourth (74 per cent) of workers lived beside or on construction sites. Dwellings of 17 per cent construction worker were self-owned houses in Gandhingar city, and remaining 12 per cent construction worker lived in shelter which was provided by contractor either free of cost or on rent. In the rainy season, mosquitoes create another problem for them because they do not have a mosquito net which led to many health problems.

The study also collected the information related to toilet facility at workplace. Out of total, approximately 41 per cent construction workers had pointed out that there had no any toilet facility at construction site. Nearly 59 per cent construction workers had pointed out

that there had a toilet facility at construction site. The structure of toilet at construction site is revealed in table no 3.

Table No. 3: Structure of Toilet at Construction Site (in %)

If yes, Structure of Toilet			If no, Structure of Toilet			
Sr.No.	Structure of toilet	Total	Sr. No.	Nature of toilet	Total	
1.	Pucca	18 %	1.	Jungle	13 %	
2.	Semi-Pucca	17 %	2.	Sulabh Complex	2 %	
3.	Steel Tent	19 %	3.	Both Jungle and Sulabh Complex	26 %	
4.	Plastic Tent	5 %	Total			41 %
Total		59 %				

Source: Primary Survey: 2012

Structures of toilet at construction site were Pucca, Semi-pucca, steel and plastic built toilets. Out of total, nearly 19 per cent workers had used steel built toilets. Similarly, 18 per cent construction workers had used pucca built toilet, whereas 17 per cent workers had semi-pucca toilet, and remaining 5 per cent had plastic built toilet in Gandhinagar's construction industry. The condition of toilet is totally unhygienic due to improper sanitation facility.

On the other hand, out of total, 41 per cent workers had pointed out that there had no toilet facility at construction site. They were used either sulabh complex or go to Jungle/forest in the city. Out of 41 per cent, 26 per cent workers went for toilet to both Jungle/forest and sulabh complex, followed by 13 per cent were gone to Jungle/forest and remaining 2 per cent construction workers were used sulabh complex.

Potable Water Facility

The supply of drinking water for worker is observed at construction site in Gandhinagar. Out of the total, nearly 94 per cent construction workers had pointed out that there had drinking water facility at construction site. Remaining 6 per cent construction workers had pointed out that they were taking drinking water either from home or from a neighbor's home nearby construction sites. The source of the drinking water at a construction site is revealed in the table no 4.

Table No.4: Structure of potable water at Construction Site

Sr. No.	Source of Water	Total
1.	Bore well	62 %
2.	Corporation/Tap	21 %
3.	Tanker	11 %
Total		94 %

Source: Primary Survey: 2012

Major source of potable water is bore wells at in Gandhinagar. Out of total, 62 per cent were taking water from this source only, followed by 21 per cent construction workers which were getting water from the corporation/tap sources and remaining 11 per cent construction workers which were taking water from tanker service provided by Gandhinagar Municipal Corporation.

Electricity Facility and Electronic Equipment used by Construction Worker

From the study, it can be revealed from the table 5 that majority of workers were receiving electricity in their dwelling at construction site. Out of the total, 74 per cent construction workers received 24 hour electricity facility in Gandhinagar. Remaining 26 per cent were having no electricity facility. The Information about the electronic equipment such as T.V., Mobile and Radio etc. used by construction worker is also observed during the study.

Table No.5 :Electricity Facility, Electronic Equipment Used by Construction Worker

Electricity Facility at Construction Industry	
Yes	74 per cent
No	26 per cent
Electronic Equipment Used by construction workers	
Yes	67 per cent
No	33 per cent
If Yes, which equipment	
Mobile	61 per cent
Mobile & T.V.	6 per cent

Source: Primary Survey: 2012

Information about Electricity Facility and Electronic Equipment used by Construction Worker is revealed in the table no 5. Out of the total, 67 per cent of the workers pointed out that they used electronic equipment during leisure time. Out of 67 per cent, 61 per cent construction workers used mobile phone, followed by 6 per cent construction workers were T.V., as well as mobile phone during construction work. Remaining 33 per cent states that they had not used any equipment during construction work. Out of total, no single female construction workers had mobile at construction site.

Working Conditions and other Benefits

Working hours in the construction industry was generally found to be long, with a persistently high duration of overtime. In general, the average working hours of construction workers varied considerably, but most of them work as much as 8 to 12 hours a day. The Majority of the workers said that the weekly off should be on

Sunday/Sunday afternoon. A few workers also pointed out that apart from regular leave, they should get leave on festivals such as Diwali and Holi etc. Leave related information by the construction workers in a month is revealed in table no 6.

Table No.6 : Leave Taken by Construction Workers

Sr. No.	Leave taken in Month	Per cent of Respondents
1.	Below 4 days	86 per cent
2.	4 to 7 days	11 per cent
3.	7 days & over	3 per cent
	Total	100 per cent

Source: Primary Survey: 2012

The majority of construction worker, i.e. 86 per cent construction workers had taken four days of paid leave in a month, 11 per cent of them had taken four to one week off and remaining 3 per cent of construction workers had taken one week and over off in the construction industry. They were not receiving any wage during leave/holiday. Though they are entitled to wage during holidays.

Satisfaction Level among Workers

Basic facilities at the work place and communication between employers and employee determine the satisfaction level at work place. Table no. 7 reveals that across the top row are the requested statistics of N (No. of Respondents), minimum (lowest), maximum (highest), mean (average), std. deviations (standard deviation) and skewness statistics and Std. error of the skewness. Note, for Valid N (listwise) only includes the respondents with no missing data on any variable requested in the output.

The mean of gender of workers is .25 which indicates that 25 per cent were coded as 1 (Female) i.e. 25 per cent workers are female construction workers, and remaining 75 per cent workers were coded as 0 (male) i.e. 75 per cent are male construction workers. The mean of family type were .28 which indicates that 28 per cent workers were coded as 1 (joint family) i.e. 28 per cent worker live in a joint family, and remaining 72 per cent were coded as 0 (nuclear family) i.e. 72 per cent workers live in nuclear family. The mean of working and living condition is .71, which indicates that 71 per cent of the workers were coded as 1(No) i.e. 71 per cent construction workers were not satisfied with working and living conditions on construction site, and remaining 29 per cent of the workers were coded 0 (Yes) i.e. 29 per cent workers were satisfied with working and living conditions.

Table 7: Descriptive Statistics of Working & Living Conditions of Construction Workers

	N	Minimum	Maximum	Mean	Std.Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std.Error
Working & living condition	100	0	1	.71	.456	-.940	.241
Gender	100	0	1	.25	.435	1.172	.241
Family type	100	0	1	.28	.451	.995	.241
Water facility	100	0	1	.05	.219	4.193	.241
Toilet facility	100	0	1	.41	.494	.372	.241
Accommodation facility	100	0	1	.19	.394	1.605	.241
Electricity facility	100	0	1	.26	.441	1.111	.241
Electrical equipment used	100	0	1	.33	.473	.734	.241
First aid facilities	100	0	1	.70	.461	-.886	.241
Overtime Wages (more than 8 hours)	100	0	1	.03	.172	5.565	.243
Knowledge building & other construction act, 1996	100	0	1	1.00	.000		
knowledgea about any act and schemes	100	0	1	1.00	.000		
Valid N (listwise)	100						

Source: Primary Data, 2012

Similarly, mean of water facility, toilet facility and accommodation facility were .05, .41, and .19 respectively, which indicates that 5 per cent, 41 per cent and 19 per cent were coded as 1 (No) i.e. 5 per cent workers pointed out that there is no water facility, 41 per cent workers mentioned that there is no toilet facility and 19 per cent have no accommodation facility at construction site. Remaining 95 per cent, 59 per cent and 81 per cent mentioned that there is water facility, toilet facility and accommodation facility respectively.

Further, the mean of electricity facility and electronic equipment used by workers is .28 and .33 which indicates that 28 per cent and 33 per cent workers were coded 1 (No) i.e. 28 per cent and 33 per cent workers pointed out that they have no electricity facility and they did not used any electronic equipment. Remaining pointed out that they have electricity facility and they used electronic equipment during the construction work. A simpler guideline for skewness is that if the skewness is less than plus or minus one ($< \pm 1$), the variable is at least approximately normally distributed. From the statistical result, we can see that the variables such as family type, toilet facility, electrical equipment used by worker, first aid facility on construction sites are at least approximately normally distributed. But, the skewed value of working-living condition is negative (-.940) i.e. negative skewness which reveals that working and living conditions of construction worker is not satisfactory in the city.

Conclusion

The construction sector is though one of the fastest growing sector of Indian economy and especially of informal economy. Even then construction worker is constituted the most vulnerable and poor segments of the unorganized sector, as far as Indian labour market is concerned. The study comes up with the finding that the condition of construction labour is quite miserable. They are widely lacking the basic facilities of life. Most of the family are lacking widely the nutritious food. The workers cook food in the one room house, almost all of them are lacking in terms of awareness about the social security schemes. Apart from the general absence of job security, no social security legislations, no union group etc. and, terrible working and poor living condition has added to the plights of the construction worker. The living conditions are like that of slums in urban area.

Finally, the study suggests an urgent need to improve the sanitation and living conditions at the construction site, including personal protection, accommodation and toilet conditions at construction sites in Gandhinagar. Due to the unorganized nature of the work and there is no direct communication between employee so employer gets a chance to exploit the construction workers. At the end it can be said that there is a need to improve the living and working conditions of construction workers by giving them their dues i.e. minimum wages, basic amenities, and social security etc. to all workers. Their hygiene level should be maintained at work place. Awareness programmes among workers at the individual and institutional level is most essential for their overall upliftment. There is a dare need for strong action against the contractor who are not providing first-aid facilities at work place.

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