

**Original Article**

# WORKING CONDITIONS OF MALE CONSTRUCTION WORKER AND ITS IMPACT ON THEIR LIFE: A CROSS SECTIONAL STUDY IN SURAT CITY

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## ABSTRACT

**Background:** The construction sector is an important sector of the economy and contributes significantly to GDP. The working conditions and the facilities provided at the sites are far from satisfactory.

**Objective:** 1) To study socio-demographic profile of male construction workers. 2) To study certain working conditions and its impact on health of workers. 3) To study the pushing factors for migration among them.

**Study Design:** Cross-sectional.

**Materials and methods:** Three different construction sites of Surat city were selected by convenience sampling. All male construction workers from these three sites were selected. Necessary consent and permission was obtained. Data collected in preformed, pre-tested questionnaire. Analysis was done by Epi-info software.

**Results:** Out of 93 workers, 3.25% were children and 9.67% were adolescents. Illiteracy was 45.2%. All the workers were migrants. Skilled workers earned Rs 75 more than the unskilled workers per day. Mean hours of working was 8.5 per day. Body-ache was the commonest complaint with the average complaint being 0.8 per worker. Most common habit among them was tobacco chewing (48.38%). Morbidity was higher among unskilled workers. There was a statistically significant association between type of workers (skilled or unskilled) and morbidity status ( $p < 0.05$ ).

**Key Words:** Construction Workers, Migration, Working condition, Health problems

## INTRODUCTION

The construction sector is an important sector of the economy and contributes significantly to GDP. According to the NSSO estimates, about 5.57 percentages of workers are engaged in building and other construction work<sup>1</sup>. There are around 500,000 construction workers in Gujarat state alone<sup>2</sup>. The construction industry is one of the largest and oldest industries to be generating employment in India, next to the agriculture sector. The Government of India formulated a bill for construction workers 1996.

The construction workers are regarded as the prototype of extremely demanding jobs tagged as 3-D: dirty, dangerous and difficult. They have scarcity of money to cater to the needs of their family members. The local construction workers suffer from chronic unemployment due to the availability of large numbers of migrant workers who are willing to work at lower wages<sup>3</sup>.

Surat is one of the fastest growing cities in the world<sup>4</sup>. There is a high need of construction workers in Surat city. So, high number of workers migrates from different part of country.

There is a need for information regarding their socio-economic, working conditions and its impact on their life, problems they have to face. There are many studies done in the past on life of female construction workers. Very few studies are available for life and working condition of male construction workers. This prompted us to undertake this study on male construction workers.

## OBJECTIVES

1. To study the socio-demographic profile of male construction workers.
2. To study certain working conditions and its impact on health of workers.
3. To study the pushing factors for migration among them.

## MATERIALS AND METHODS

This is a cross-sectional study carried out at 3 different construction sites selected by convenience sampling in Surat city from April 2011 to June 2011. All male construction workers from these 3 sites were included in the study. Necessary consent was obtained from the workers and permission taken from concerned authorities at construction sites. Data was collected in a preformed, pre-tested and semi-structured questionnaire. The questionnaire comprised of questions regarding following information: 1) General information like age, sex, religion, native place, education, marital status. 2) Detailed information regarding migration i.e. reasons and duration of migration. 3) Detailed information regarding working conditions i.e. types of work, duration of work, daily wages, waiting period for work etc. 4) It also included information regarding facility available at working place like living, drinking water, domestic water, bathing, toilet etc. 5) It included different types of health problems they have to face, place for treatment and their expectation regarding further facilities. Some questions were kept open ended to collect more information regarding their life style.

The participants staying in the study area for 5 years or less were considered to be a migrant. A person using any tobacco product on a daily basis for more than 1 year was labeled as a tobacco user. 'Alcohol user' label was given to those who had consumed alcohol at least once per month. A skilled worker is one who is

capable of working independently and efficiently. An unskilled worker is one who possesses no special training and whose work involves the performance of simple duties that require the exercise of little or no independent judgment or previous experience. They work under supervision and follow instructions<sup>5</sup>.

## RESULTS

A total of 93 male construction workers were included in the study from 3 different construction sites. The mean age of workers was 23±7.31 years and majority (93.5%) belonged to 15-45 yrs age group, 93.5% were Hindus and 64.5% were married. More than half were literate (54.8%), although level of education was mostly primary (29.0%) or secondary (25.8%) education. Illiteracy was seen among 45.2% workers.

**Table1: Distribution of Construction workers according to different socio-demographic parameters**

Parameters	Workers (N=93) (%)
<b>Age</b>	
<15	03 (03.2)
15-45	87 (93.5)
45-60	03 (03.2)
<b>Marital Status</b>	
Married	60 (64.5)
Unmarried	33 (35.5)
<b>Religion</b>	
Hindu	87 (93.5)
Muslim	06 (06.5)
<b>Education</b>	
Illiterate	42 (45.2)
Primary	27 (29.0)
Secondary	24 (25.8)
<b>Workers Type</b>	
Skilled	26 (27.9)
Un skilled	67 (72.0)
<b>Original State</b>	
Bihar	18(19.4)
Madhya Pradesh	54(58.1)
Rajasthan	12(12.8)
Jharkhand	03(03.2)
Other part of Gujarat	06(06.5)

All the workers were migrants. Maximum migration was seen from the state of Madhya Pradesh (58.1%) followed by Bihar (19.4%), Rajasthan (12.8%) and Jharkhand (3.2%). Migration from other part of Gujarat was 6.5%

(Table 1). Out of them 58.1 % lived with their families, while 41.9% lived alone. Most common pushing factor for migration was financial (83.8%). However 35.4% migrated due to lack of water for agriculture while 16.1% had no job opportunity in their native place. Average daily income of skilled workers was Rs 225 and that of unskilled workers was Rs 150. Average monthly income of workers was between Rs 5000 to Rs 3500. Mean hours of working in a day was  $8.5 \pm 0.8$  hours with 1 hour rest after 5 hours of working. Job satisfaction (amount and type of work) was seen among 77.4% workers where as 58.1% workers were satisfied with their daily wages. Regarding the health issues 48.3% had one or more of the following complaints-chronic body ache (38.7%), headache (16.1%), fever (12.9%), malaria and fatigue (9.6%). Average number of health complaints was 0.8. Amongst workers, 48.3% admitted to tobacco chewing, 19.3% to smoking and 6.45% to alcohol (Table 2).

**Table 2: Distribution of workers according to Health Problems and habits**

Parameters	Workers (N=93) (%)
<b>Health Complaints</b>	
Chronic Bodyache	36 (38.7)
Headache	15 (16.1)
Malaria	09 (9.7)
Fatigue	09 (9.7)
Fever	12 (12.9)
No complaints	48 (51.6)
<b>Habits</b>	
Alcohol	06 (06.4)
Tobacco chewing	45 (48.4)
Smoking	18 (19.3)

After probing, 29.0% described stress of work as a reason for their habits. Regarding the treatment seeking behavior of construction workers, majority of the workers (87.1%) take treatment from a qualified doctor. Out of those who took treatment, 58.1% preferred private hospitals against 41.9% who chose Government Hospitals.

**Table3: Association between type of worker and morbidity Status.**

Workers	Health Complaints (%)		$\chi^2$ , P Value
	Presence	Absent	
Unskilled	37(55.2)	30(44.8)	4.48,
Skilled	08(30.7)	18(69.2)	0.03
Total	45(48.3)	48(51.6)	

**Table 4: Association between duration of work and health effects**

Duration of work	Health effect		$\chi^2$ p value
	Present	Absent	
>8hours	24	22	0.10, 0.37
< 8 hours	21	26	
Total	45	48	

**Table 5: Association between habits and health effects**

Habits	Health effect		$\chi^2$ p value
	Present	Absent	
Yes	30	15	7.9, 0.002
No	15	33	
Total	45	48	

Morbidity was higher among unskilled workers (55.2%) as compared to skilled workers (30.7%). There was a statistically significant association between type of worker and morbidity status (Table 3). Regarding the working conditions, all workers agreed on the fact that basic facilities like drinking water, water for domestic use and toilet were available but no bathing facilities available at the working site. They have to take bath in open space. Majority (67.74%) wished for some more facilities at the construction site. No workers had any knowledge about the construction workers act. Moreover, nobody had any awareness regarding the importance of having an identity card, insurance, pension scheme or trade union. When these issues were discussed and explained, 74.25% of workers felt that these should be available for them.

## DISCUSSION

Present study involving 93 male construction workers showed that majority (93.5%) of the workers belonged in the 15-45 years with the mean age being  $23 \pm 7.31$  years. This corroborates with the study of Adsul BB et al where 96.4% belonged to the 15-45 years age group. The mean age of workers was  $26.25 \pm 8.49$  years<sup>5</sup> which is higher than that reported in this study. In this study, it was seen that 3 workers belonged to less than 14 years (3.2%) age. Factory act, 1948 prohibits employing a child below 14 years age. This brings forward the necessity of getting this sector more organized. Implementation of the factory act needs more stringent monitoring and supervision. Nine workers (9.6%) were actually students aged between 15 to 19 years. They had joined this work with their families during their vacation

period to increase the earnings of the family. Poverty is often the main reason cited by school drop outs. Age group 15 to 19 years is the most crucial time for career building opportunities and the vacation time are usually utilized for additional coaching/training in the affluent houses. Parents need to be counselled regarding the importance of education and should be positively motivated to allow their children to complete their studies. Social welfare measures with financial incentive to poor children may address these issues.

In the present study, 45.2% of the workers were illiterate while the rest of them had primary level (29.0%) and secondary level (25.0%) education. Dr S. N. Das et al study found these rates to be 65.1%, 13% and 10.3%<sup>6</sup>. Thus, although the national illiteracy level is 74.04% (census 2011), we observe that it may be much higher in specific pockets and contributes to the poor social/health related indicators.

In the present study, 58.1% workers were living with their families and 41.9% were living alone. Bharathiyar University study reported that 78% workers were living with their families and 22% workers were living alone<sup>7</sup>. Living alone could be an outcome of migration. In Surat where multiple studies have reported high risk behavior among migrants, these 41.9% may be a vulnerable group. As a policy, counselling services for migrant workers should be initiated to ensure a healthy workforce.

All the workers were migrants. Maximum migration was seen from the state of Madhya Pradesh (58.1%) followed by Bihar (19.4%), Rajasthan (12.8%) and Jharkhand (3.2%). Migration from other part of Gujarat was 6.5%. Commonest reason for migration cited was to earn more money (83.87%). Farmers from Madhya Pradesh (58.1%) gave a very interesting and important reason for migration. Only source of water in their part is rain water and the unpredictability of monsoon often leads to lack of water for farming which limits their opportunity and reduces productivity. Thus farming was not a viable means of livelihood and resulted in migration. Similar finding was reported by Bharathiyar University study which stated that agricultural failure due to drought conditions, poverty in their native are pushing factors of migration. Employment opportunity is the pulling factor<sup>7</sup>.

In the present study, we found that 71% workers were unskilled and 29.03% were skilled. There

was a statistically significant association between type of worker and morbidity status ( $p < 0.03$ , chi-square- 4.48). The probable reason could be that unskilled workers are subjected to more intense physical labor and sometimes to more risky working conditions. Adsul BB et al also reported a significant association between type of occupation and morbidity status ( $p < 0.03$ , chi-square- 4.59)<sup>5</sup>. Average daily income of skilled workers was Rs 225 and unskilled workers Rs 150. The total monthly income of workers averaged around 4000 to 5000. This can be explained by the fact that they have to wait for 5 to 7 days per month for getting new work (mean waiting days per month is  $6.5 \pm 3.8$ ). Bharathiyar University study reported that 15% of migrant workers earn more than Rs. 4000/- per month and nearly 14% of them earn around Rs. 3000/- to 4000/- per month, 69% of them earned less than Rs. 3000/-<sup>7</sup>.

In this study 74.4% were satisfied with their work where as only 58.1% workers were satisfied with their wages. Thus wages were not commensurate with their expectations. However, they continued because no other better alternative was available to them.

In this study among 93 workers 58.0% were admitted to some form of addiction. The commonest addiction reported was tobacco chewing (48.3%), followed by smoking (19.3%) and alcohol (6.4%). Adsul BB et al study report 50.5% tobacco users and 14.6% alcohol users<sup>5</sup>. Lower level of alcohol addiction needs to be interpreted with caution. Alcohol use is illegal in the state of Gujarat. Thus the low rate could be due to the lack of availability or could be a lower reporting fearing punishment. Amongst the alcohol and tobacco users 29% described stress of work as a reason for their habits.

The health complaints reported by the workers were body ache (38.7%), followed by headache (16.2%); malaria (9.8%); fatigue (9.8%) and fever (12.9%). Average number of health complaints in workers was 0.8. Similar finding were reported by SEWA study which reported that 74.4% of men complained fatigue, bodyache<sup>3</sup>.

## CONCLUSION

From this study it was seen that migration compounded by illiteracy, poor working conditions, lack of infrastructures and security, inadequate health service utilization made these workers a vulnerable population. It may be said

that the construction workers are working in an unorganized sector and special policies need to be initiated to protect this group. They are not satisfied with their wages and are ignorant about the social welfare measures available to them. The working conditions along with their health have lots of scope for improvement. There is a need to enforce the existing laws more stringently. Parents need to be counselled regarding the importance of education. A more healthy and satisfied workforce would lead to better productivity. Hence this study recommends a comprehensive, universal and integrated Social Security System for these unorganized construction workers.

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