

## MORBIDITY ASSESSMENT OF CONSTRUCTION SITE WORKERS

Dr. Mohammed Shadab Gouri<sup>1</sup>, Dr. Shikha Sharma<sup>2\*</sup>, Dr. Shiv Prakash Sharma<sup>3</sup>

1- Sr.Demonstrator, Government Medical College, Kota, 2- Assistant Professor, Government Medical College, Kota, 3- Sr.Demonstrator, RUHS College of Medical Sciences, Jaipur

\*Email id of corresponding author- [shikhasharma23feb@gmail.com](mailto:shikhasharma23feb@gmail.com)

Received: 25/05/2017

Revised: 02/09/2017

Accepted: 12/09/2017

### ABSTRACT

**Background:** occupation plays a central role in people's health since most workers spend not less than 8 hours of day at their workplace, whether it is an office, construction site, or a factory. In India construction site workers are mostly inter-state migrants, less educated and not aware about preventive health measures. Present study addresses the health problems among construction site workers and to educate them about preventive health measures. **Material & Methods:** Cross sectional study conducted during the period of January 2017 to June 2017. 300 construction site workers were selected by purposive sampling method. Data were collected after undertaking proper written consent of each worker for their voluntary participation. **Results:** In present study the out of total 300 workers 54% were anaemic. The morbidity pattern shows that 26.3% were had skin diseases, 19% workers had musculoskeletal problems, 8.6% workers had hypertension, Urinary tract infections found in 7 % workers, 7.6% had ophthalmic problems, 5.6% reported respiratory problems, Gastrointestinal problems were found in 5% respondents. Out of total 300 workers 08 (2.6%) were suffering from occupational injuries. **Conclusions:** The study concluded that poor working conditions along with illiteracy, lack of infrastructure and security most important the inadequate health service utilization make these workers a vulnerable population to morbid health conditions.

**Key words:** construction site workers, health, morbidity.

### INTRODUCTION

Occupation plays a central role in people's health since most workers spend not less than 8 hours of day at their workplace, whether it is an office, construction site, or a factory.(1)Occupational health is directly related to health status in relation to work and environment.(2). The total occupational worker force in India is estimated nearly 318 Million in which the organized sector employees are about 27 Million while the unorganized sector employees are around 291

million. Indian industry hence remains highly intensive and often administer relatively inexpensive and hazardous technology mainly due to financial constraints and it is mainly seen in unorganized small sectors.(3)

There are two main categories of construction site works civil engineering and building. These involve building of structures such as factories, schools, apartments, hospitals and offices. While

Civil engineering includes other structures like road network, tunnels, dams, canals, railway tracks, and ports.(4)Workers in both groups are at a greater risk of certain health hazards, disorders and sickness than workers working in any other industries.(5) construction site workers are vulnerable to several chemical, physical and biological agents, which can make them target for various health hazards including accidents, injuries, respiratory problems, skin diseases, gastrointestinal diseases and musculoskeletal disorders.(6) The hard physical labour, extreme working conditions, low payroll, low socio-economic status, and separation from family, lack of job security and lack of access to health services makes the situation worse.(7) . Apart from all this, most of the construction site projects are not guided by the proper legislations made for the healthcare of the workers and therefore they are not entitled for free or subsidized health care.(8)

In India construction site workers are mostly inter-state migrants, less educated and not aware about preventive health measures and also having poor language skills which prevent them from understanding the safety precautions given. (9)(10)In this context, present study was

conducted to assess the health problems among construction site workers and to educate them about preventive health measures for the promotion of health and prevention of diseases.

## Materials and Methods

The present cross-sectional study was carried among 300 construction site workers at construction site located near government medical college, Kota from January 2017 to June 2017 by the use of purposive sampling method. Data were collected after undertaking proper written consent of each worker for their voluntary participation. Data were collected through general physical examination, clinical examination and oral questionnaire method using pretested Performa. The data were analyzed by SPSS v22, Microsoft Word and Excel 2010.

## Results

The present Study shows that majority of the subjects 135 (45%) were in the age group of 15-30 years, 40% were between 30-45 years of age, 15% were 45-60 years age group. Out of total 300 workers, 74% were males and 26% were females. [table1]

**Table 1: Distribution of workers according to age & sex**

	Sex		Total
	Male	Female	
<b>15-30</b>	87(29)	48(16)	135(45)
<b>30-45</b>	90(30)	30(10)	120(40)
<b>45-60</b>	45(15)	0	45(15)
<b>Total</b>	222(74)	78(26)	300(100)

\*figures in the parenthesis indicate percentages

In present study the morbidity pattern shows that about 57 (19%) workers have musculoskeletal problems like weakness, body ache, joint pain, low back pain, etc., while 19 (06.3%) have fever, 17(5.6%) reported respiratory problems like cold, cough, breathlessness, chest pain. Out of total workers 23 (7.6%) having ophthalmic problems, mainly redness, itching and watering in the eye. Gastrointestinal problems were found in 15 (5%) respondents complained of such as diarrheal, abdominal pain and cramps, constipation, and haemorrhoids. Skin diseases were found in 79 (26.3%) like dermatitis and

itching. Urinary tract infections found in 21(7%) workers and 10(3.3%) were suffering from venereal diseases. Out of total 300 workers 162 (54%) having hemoglobin levels less than 11gm/dl. 26 (8.6%) workers having blood pressure levels more than 140/90 mm of hg. There was no one in present study having random blood sugar level more than 200 mg/dl. Out of total 300 workers 08 (2.6%) were suffering from occupational injuries mainly from abrasion followed by cut injury, Prick, Blunt trauma and laceration [table 2

**Table 2: Distribution of workers according to present morbidity**

<b>Morbidity</b>	<b>No. of workers</b>	<b>Percentage (%)</b>
<b>Fever</b>	19	6.3
<b>Headache</b>	14	4.7
<b>Respiratory problems</b>	17	5.6
<b>Gastro-intestinal problems</b>	15	5
<b>Skin diseases</b>	79	26.3
<b>Ophthalmological problems</b>	23	7.6
<b>Ear discharge</b>	03	1
<b>Urinary tract infections</b>	21	7
<b>Venereal diseases</b>	10	3.3
<b>Musculoskeletal disorders</b>	57	19
<b>Injuries</b>	08	2.6
<b>Anemia</b>	162	54
<b>Hypertension</b>	26	8.6
<b>Diabetes</b>	00	00
<b>No problem identified</b>	95	31.7

\*Multiple response answers

## Discussion

In our study, the majority of the construction site workers belonged to the 15-30 year of age group, on the other hand the morbidity was more common among 30-45 years of age group. Majority of the workers were unskilled and worked more than 8 hours per day. The study revealed that the most common type of morbidity among construction workers was the anaemia (54%) followed by skin problems (26.3%) and Musculoskeletal disorders (19%).

In the context of age group of construction workers, 45% workers were belonged to 15-30 years age group followed by 40% from 30-45 years and 15% from 45-60 years age group. Similar results were found in the studies done by Tiwary et al on occupational health and social security of unorganized workers in the construction industry at regional occupational health center, Kolkata(10). Similar results also found in study done by BB Adsul et al on Health problems among migrant construction workers in Mumbai(7) and also similar findings found in a cross sectional study in Surat city conducted by H Patel et al on working conditions of male construction worker and its impact on their life(11).

Around 17% workers were from age group 15-19 years. The main reason behind this is poverty to join the construction industry along with school drop outs. This age group is the most important for education and also for career building opportunities which were dissipated by these unfortunates. Their parents should be counselled about the importance of education and should be motivated to allow their children to enrol in schools and complete their studies.

Maximum morbidity was found in age group of 30-45 years (45%) followed by 15-30 years

(38%). Almost similar findings also found in study done by BB Adsul et al on Health problems among migrant construction workers in Mumbai(7). There were 79% unskilled workers and 21% skilled workers in our study. Daily wages for unskilled workers ranges from Rs.200 to Rs.250 and for skilled workers ranges from Rs.400 to Rs.450. To cope up with the daily requirements the unskilled workers had to take loans from their relatives, friends etc. This hardship might result in stress and strain among workers which can contribute to the morbidity of the unskilled workers along with minor injuries due to not being skilled.

In the present study, anaemia was the most common problem (54%) followed by skin diseases (26.3%), they were mainly itching and dermatitis. Similar findings were also observed by Trivedi Ashish et al on prevalence of skin morbidity among construction site workers working at Vadodara where dermatological problems were 20.3% in the form of dermatitis and itching(12). On the other hand dermatological problems were found most common (56%) in study conducted by S Srinivasan(13). But similar results were found in studies done by Kuruvila M et al(14) and BL Chawda et al(15), the dermatological problems were 12.48% and 10.5% respectively. Dermatological problems such as dermatitis, fungal infections are very common in the construction industry. Contact with lime and cement may lead to irritant dermatitis. The presence of cobalt and chromate in cement is known to cause allergic contact dermatitis. This may be also due to poor hygiene practices like nonuse of gloves, no hand washing and overcrowding.

Prevalence of MSD reported in our study was 19%. It includes weakness, body ache, backache,

joint pain etc. Similar result was also found in the study conducted by Sameer Valsangkar et al on Impact of musculoskeletal disorders and social determinants on health in construction workers (16). In other studies prevalence of MSD was higher as in Sarika Manhas (44%) study conducted on physical health status of male construction workers of Jammu city. (17)

The limitation of present study was that temporalities and causation of the health outcomes were not proved because it was a cross-sectional study hence the actual incidence could not be recorded and also we had not gone to their residential places, therefore could not establish the actual association between housing conditions and environment on their health status.

## Conclusion

The study concluded that imperative need for an overall socioeconomic development as a key for achieving the desired health status. There has to be a political will and efforts from government to initiates scheme and health programs to ensure that the root of socioeconomic development reaches the common man living in far-flung areas of the country.

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