ORIGINAL RESEARCH

Distribution of deaths in various occupational settings

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ABSTRACT
Background: With a surface area of over 3.3 million km2, India is a huge country. India had 1.025 billion people living there as of the 2001 Census. In recent years, globalization and fast industrial growth (about 7% annual economic growth) have made occupational health-related problems even more difficult. The present study was conducted to assess distribution of deaths in various occupational settings. **Materials & Methods:** 86 cases of deaths at work place subjected for medico legal autopsy were included. Parameters such as socio-economic status, occupation, period of survival, precipitating factors and nature of employment etc. was noted. **Results:** Out of 86 cases, 51 were males and 35 were females. Socio-economic status was upper in 12, middle in 28 and lower in 46. Occupation was factory worker in 17, construction worker in 39, security worker in 6, sanitary worker in 2, police in 4, manager in 10, and painterin 8 cases. Period of survival was deaths at work site in 32, deaths enroute to the hospital in 30, <1 day in 15, 1-7 days in 3, >7 days in 2 cases. Precipitating factors was alcohol in 10, medicationin 26, and unascertained factorsin 50 cases. Nature of employment was permanent workers in 40, and temporary workers in 48. The difference was significant (P< 0.05). **Conclusion:** Construction workers are the ones who die at work the most often. The majority of the instances were people from lower socioeconomic backgrounds.
Keywords: autopsy, employment, medication

INTRODUCTION

With a surface area of over 3.3 million km2, India is a huge country. India had 1.025 billion people living there as of the 2001 Census. In recent years, globalization and fast industrial growth (about 7% annual economic growth) have made occupational health-related problems even more difficult. Making the most of India's enormous human resource base is the foundation of the entire idea of turning emerging India into developed India. One way to think at the Vision 2020 framework is as human resources- large workforce and industrial expansion, the expansion of the economy, India was developed.

The frequency of on-duty worker fatalities is rising in spite of the federal and state governments' attempts to guarantee workplace safety.Due to a lack of space in desirable areas, a slow shift in the social concept of an isolated home toward more upscale apartments, and the preference of younger generations for the well-equipped flat culture, an increasing number of skyscrapers are being built, which is ultimately causing more accidents.The present study was conducted to assess distribution of deaths in various occupational settings.

MATERIALS & METHODS

The study was carried out on 86 cases of deaths at work place subjected for medico legal autopsy. Family members gave their written consent to participate in the study.

Data such as name, age, gender etc. was recorded. Parameters such as socio-economic status, occupation, period of survival, precipitating factors and nature of employment etc. was noted. Results thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of cases

Total- 86		
Gender	**Male**	**Female**
Number	51	35

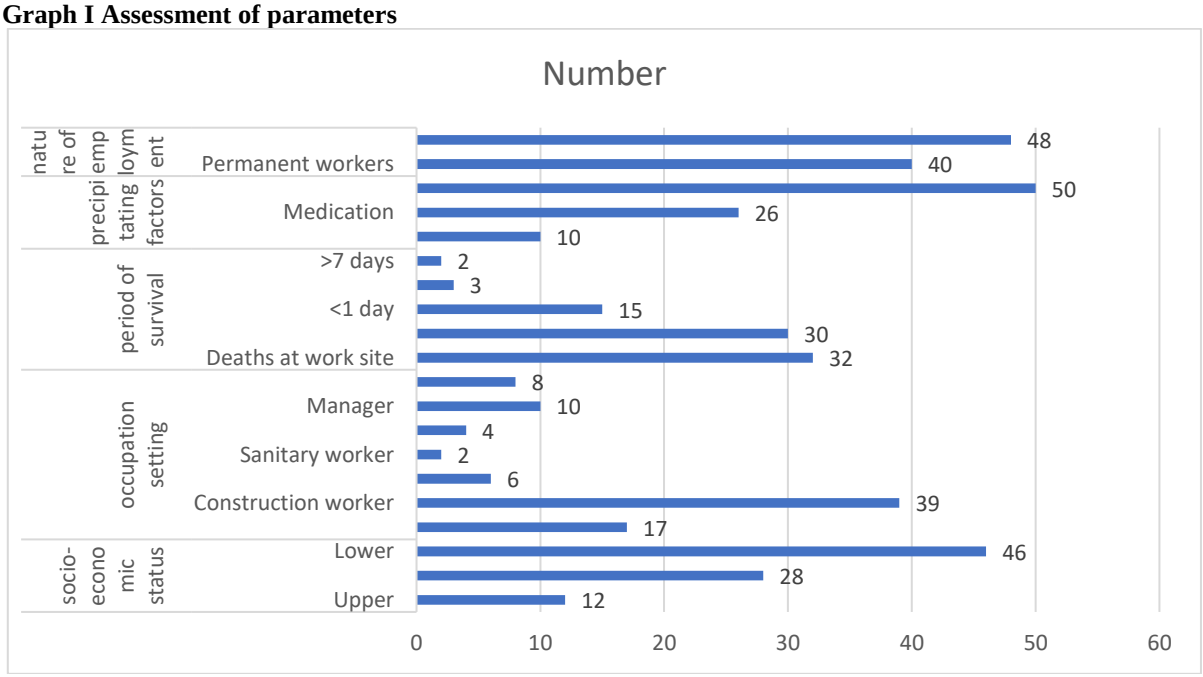
Table I shows that out of 86 cases, 51 were males and 35 were females.

Table II Assessment of parameters

Parameters	Variables	Number	P value
socio-economic status	Upper	12	0.04
	Middle	28	
	Lower	46	
occupation setting	Factory worker	17	0.01
	Construction worker	39	
	Security worker	6	
	Sanitary worker	2	
	Police	4	
	Manager	10	
	Painter	8	
period of survival	Deaths at work site	32	0.01
	Deaths enroute to the hospital	30	
	<1 day	15	
	1-7 days	3	
	>7 days	2	
precipitating factors	Alcohol	10	0.03
	Medication	26	
	Unascertained factors	50	
nature of employment	Permanent workers	40	0.75
	Temporary workers	48	

Table II, graph I shows that socio-economic status was upper in 12, middle in 28 and lower in 46. Occupation was factory worker in 17, construction worker in 39, security worker in 6, sanitary worker in 2, police in 4, manager in 10, and painter in 8 cases. Period of survival was deaths at work site in 32, deaths enroute to the hospital in 30, <1 day in 15, 1-7 days in 3, >7 days in 2 cases. Precipitating factors was alcohol in 10, medication in 26, and unascertained factors in 50 cases. Nature of employment was permanent workers in 40, and temporary workers in 48. The difference was significant (P< 0.05).

Graph I Assessment of parameters



DISCUSSION

Occupational fatalities refer to deaths that occur as a result of injuries or health conditions that are directly related to someone's work or occupation. These fatalities can happen in a variety of industries, including construction, manufacturing, transportation, agriculture, healthcare, and more.The causes of occupational fatalities can be diverse, including workplace accidentssuch as falls, machinery accidents, explosions, or vehicle crashes.Health-related issues such as prolonged exposure to hazardous substances like asbestos, chemicals, or heavy metals that can lead to diseases like cancer or respiratory illnesses.Overexertion- injuries caused by repetitive strain, lifting heavy loads, or long hours of physical labor.Violence in the workplace- Assaults, robberies, or other violent incidents.The present study was conducted to assess distribution of deaths in various occupational settings.

We found that out of 86 cases, 51 were males and 35 were females.Shreedhara KC et al[11] found that of the total 1125 medico legal autopsies conducted during the study period, death at work place constituted 52 cases (4.62 %).In the study maximum numbers of deaths at work place were from the lower socio-economic status- 36 cases (69.23%), followed by middle socio- economic status -15 cases (28.85%), as ours is a developing country and much of the people fall in this group, also the changing social trends of nuclear families, illiteracy, financial problems, etc. It is observed from the above table that deaths have taken place in almost all forms of occupation in the study population and alarmingly high amongst those employed in construction work which constitutes 25 cases (48.08%).In the study population, 20 deaths (38.46%) were at the work site and 19 cases (36.54%) occurred while they were being shifted to the hospital i.e enroute or immediately upon receiving some form of medical treatment and the remaining cases the period of survival ranged from 1 to 15 days.

We found that socio-economic status was upper in 12, middle in 28 and lower in 46. Occupation was factory worker in 17, construction worker in 39, security worker in 6, sanitary worker in 2, police in 4, manager in 10, and painter in 8 cases. Period of survival was deaths at work site in 32, deaths enroute to the hospital in 30, <1 day in 15, 1-7 days in 3, >7 days in 2 cases. Precipitating factors was alcohol in 10, medication in 26, and unascertained factorsin 50 cases. Nature of employment was permanent workers in 40, and temporary workers in 48. Yanai O[12]estimated the death rates from occupational injuries in Israel over a period of 30 months, and to examine the trends in the light of the large numbers of foreign workers who have been brought into the country in the last decade. Two-thirds of the occupational fatalities were in the construction business, mostly owing to falls from a height resulting in death from multiple trauma. About one-third of these victims were foreign workers, even though they comprise only 20% of the work force in this field. Negligible amounts of alcohol were detected in a number of cases. The construction industry is recognized worldwide as a high-risk area claiming many lives each year.

The shortcoming of the study is small sample size.

CONCLUSION

Authors found that construction workers are the ones who die at work the most often. The majority of the instances were people from lower socioeconomic backgrounds.

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