

Occupational injuries: Global and local perspectives

Ayman El-Menyar^{1,2}, Ahammad Mekkodathil¹, Hassan Al-Thani³

Correspondence: Dr. Ayman El-Menyar, Clinical Research, Trauma Surgery, Hamad General Hospital, Doha, Qatar.

Email: aymanco65@yahoo.com

Received 5 May 2016/**Revised** 20 May 2016/**Accepted** 20 May 2016

Citation: EL-Menyar A, Mekkodathil A, Al-Thani H. Occupational injuries: Global and local perspectives. Nepal J Epidemiol. 2016;6(2); 560-562.

This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

Copyright © 2016 CEA& INEA. Published online by NepJOL-INASP.

www.nepjol.info/index.php/NJE

Occupational injuries are associated with lots of suffering and loss at individual, community, societal and organizational levels. The World Health Organization (WHO) recently estimated that 20-50% of the workers are exposed to various hazards at work worldwide, and this proportion is likely to be higher in the developing and newly industrialized counties [1]. It has been estimated that 960,000 or even more workers get injured and 5,330 die on daily basis because of work-related diseases [2,3]. Moreover, the International Labor Organization (ILO) and sporadic studies reported that the economic costs of work-related diseases and injury are ranging from 1.8% to 6% of GDP [3,4].

Recent reports revealed that the global incidence rate of fatal occupational injury is 71 per 100,000 workers per year [2]. The incidence rate decreased progressively in many countries in parallel with the implemented effective safety and preventive interventions. Although the overall fatal occupational injury rates in many countries is decreasing over time, it is still rising among migrants, foreign born and ethnic minority workers, especially in high risk industries [2]. This is evident from the higher rate of occupational injuries reported among the Hispanic/ Latino workers and foreign born workers in the United States, and migrant workers in the Middle Eastern and European countries [2,5-9]. Disproportionate representations of these high risk worker groups in different industries resulted in wide range of occupational injury rates.

Construction and transportation sectors are associated with significant risks [5, 6], and these high risk worker groups are more likely to be concentrated in these occupational sectors [2]. Higher proportion of individuals with certain characteristics such as low skills, low socioeconomic status, young age, male gender, illegal immigrant status, lack of language proficiency, poor communication and lack of on-the-job training among the migrant workers in fact contribute to the increased risk of occupational injuries [2]. **Table 1** shows work-related injuries and diseases in certain developing regions of the world. Southern Asian region have higher work-related injuries and deaths, however, the accuracy of data documentation is still a concern in regions shown in table 1.

Qatar is one of the few rapidly developing Middle Eastern countries that have labor laws and decree on occupational safety to ensure the protection of workers from hazards. The National Health Strategy (2011-2016) identifies occupational health as a top priority in the country. Accordingly, health and safety awareness outreach campaigns are implemented by the relevant authorities to improve the occupational safety measures. Although there is a rapid influx of migrant workers from south Asia in parallel with fast economic growth in Qatar, recent estimates showed that fatal occupational injuries decreased over time as it has been shown by Al-Thani and his colleagues [7,10]. The latter 2 studies estimates on occupational injuries are nationally representative since both

were based on trauma registry data of Hamad Trauma Center, which is the only provider of tertiary care for severe injuries in Qatar [7,10].

Al-Thani et al showed that young and male workers, in particular, were at increased risk for occupational injuries, and the majority of injured that required hospital admissions were workers from construction (43%) and transportation (18%) sectors [7]. Fall from height (51%) was the main mechanism of injury which reflects the occupational hazards associated within the construction sector [7]. Moreover, these high risk worker-groups were likely to be over-represented in the construction sector [10].

Last but not least, future research should focus on improving the quality of data on occupational injuries in the developing and low-income countries. Of note, to improve the quality of data, the creation of a dedicated multi-disciplinary task force that prospectively collects data on risk factors and outcomes for occupational injuries needs to be linked with incident investigations from the relevant authorities. The relationship between chronic conditions, the incidence and cost of occupational injuries among high-risk occupations, workplace violence and recurrent workplace injuries could be some of the priority issues to be addressed. Therefore, occupational health and safety should be specifically tailored for the workers involved in most hazardous occupations and vulnerable groups. Strict law enforcement is required to ensure compliance with safety measures and necessary precautions to avoid health risks at the workplace. There is also a need for multi-agency review of health provision for migrant workers, which should be based on thorough and independent evaluation for the major causes of mortality among migrant construction workers, and identifying key measures to improve health and safety of workers [7].

Conflict of interest:

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding:

The authors received no financial support for the research, authorship, and/or publication of this article.

Authors' affiliations:

¹Clinical Research, ³Trauma Surgery, Hamad General Hospital, Doha, Qatar

²Clinical Medicine, Weill Cornell Medical College, Doha, Qatar

Reference:

1. World Health Organization, Global strategy on occupational health for all: The way to health at work, WHO. 2014. [Last accessed on 2016 May 25]. Available from: http://www.who.int/occupational_health/publications/globalstrategy/en/index4.html.
2. Mekkodathil A, El-Menyar A, Al-Thani H. Occupational injuries in workers from different ethnicities. *Int J Crit Illn Inj Sci.* 2016 Jan-Mar; 6(1):25-32. <http://dx.doi.org/10.4103/2229-5151.177365> PMID:27051619 PMCID:PMC4795358
3. Hamalainen P, Leena Saarela K, Takala J. Global trend according to estimated number of occupational accidents and fatal work-related diseases at region and country level. *J Safety Res.* 2009;40:125-39. <http://dx.doi.org/10.1016/j.jsr.2008.12.010> PMID:19433205
4. Takala J, Hämäläinen P, Saarela KL, et al. Global estimates of the burden of injury and illness at work in 2012. *J Occup Environ Hyg.* 2014;11(5):326-37. <http://dx.doi.org/10.1080/15459624.2013.863131> PMID:24219404 PMCID:PMC4003859
5. Byler CG. Fatal Injuries to Hispanic/Latino Worker, USA. Department of Labor. 2013. [Last accessed on 2016 May 25]. Available from: <http://www.bls.gov/opub/mlr/2013/02/art2full.pdf>
6. Menendez CK, Havea SA. Temporal patterns in work-related fatalities among foreign-born workers in the USA, 1992-2007. *J Immigr Minor Health.* 2011;13:954-62. <http://dx.doi.org/10.1007/s10903-010-9379-8> PMID:20730494
7. Al-Thani H, El-Menyar A, Abdelrahman H, Zarour A, Consunji R, Peralta R, Asim M, El-Hennawy H, Parchani A, Latifi R. Workplace-related traumatic injuries: insights from a rapidly developing Middle Eastern country. *J Environ Public Health.* 2014; 2014:430832. <http://dx.doi.org/10.1155/2014/430832> PMID:24734049 PMCID:PMC3964690
8. Barss P, Addley K, Grivna M, Stanculescu C, Abu-Zidan F. Occupational injury in the United Arab Emirates: Epidemiology and prevention. *Occup Med (Lond)* 2009;597:493-8 <http://dx.doi.org/10.1093/occmed/kqp101> PMID:19640929
9. Al-Rubaei FR, Al-Maniri A. Work related injuries in an oil field in Oman. *Oman Med J.* 2011;26:315-8. <http://dx.doi.org/10.5001/omj.2011.79> PMID:22125724 PMCID:PMC3215440
10. Al-Thani H, El-Menyar A, Consunji R, Mekkodathil A, Peralta R, Allen KA, Hyder AA. Epidemiology of

occupational injuries by nationality in Qatar: Evidence for focused occupational safety programmes. *Injury*. 2015 Sep;46(9):1806-13.
<http://dx.doi.org/10.1016/j.injury.2015.04.023>
 PMid:25943291

Table 1: Work-related Injuries and Diseases

Region	Economically Active Population	Fatal (Reported)	Fatal Injuries*	Fatal work-related diseases	Total work-related mortality
African Region	251,588,449	759	44,699	336,144	380,843
Eastern Mediterranean	152,610,995	0	17,912	117,164	135,076
Southeast Asia	642,390,831	81	83,096	523,355	606,451

*ILO estimates

Data are adopted from Takala et al (ref 4)