

Safety Culture and Issue in the Malaysian Manufacturing Sector

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Abstract. . This paper highlights the Safety culture and issue in the Malaysian Manufacturing Sector and emphasis the high occupational accidents due to lack of safety culture and non-compliance of the requirements of Occupational Safety and Health Act 1994. The aim of this study is to review the occupational accidents occurrence in the Malaysia workplace since 2012-2016. Malaysia aimed to reduce the occupational accidents, the results show by DOSH increase that Occupational Noise Induced Hearing Loss 83.7%, occupational musculoskeletal diseases, 4.4% and occupational lung diseases 2.3%. But the as per the record from DOSH that in last 5-Years, the increment in the fatal accidents by Average 26%, Permanent Disability by Average 71% and Non-Permanent Disability by 64 % are investigated only in Manufacturing Industries. The government must show their high interest on such a vulnerable employees to accomplish the above aim. This step will be helpful for planning to reduce the accidents in workplaces and it will also detect the prevention for the future accidents.

1 Introduction

The Occupational Safety and Health Act 1994 (OSHA 1994) [1] was made considering the way that the Factories and Machinery Act (FMA) 1967 just secured work related safety and health in the construction industries, mining and manufacturing industry, though alternate businesses were not considered. The extent of OSHA 1994 covers all people that works in public and private sectors with the exception of military forces. The Occupational Health and Safety directions force the punishment to the employers, which they present of unsafe working conditions for their employees noncompliance with the standards [2-3].

To ensure the occupational health and safety of the persons at working in danger places, the objectives of OSHA 1994 are to protect workers at the workplace, to encourage an occupational safe environment for the employee at their workplace adjusted to their physical

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and psychological needs, and to offer the means whereby the associated occupational safety and health legislations can be gradually changed by a system of regulations and endorsed industry codes of practice.

Nowadays, work related accident became well-known as major concerned to the industries involved. This kind of problem also closely faced by the manufacturing industry's workers that involve in the different operation of handling machine and different production equipment like the use of molding machine, fabrication equipment, cranes, prime movers, and forklifts and truck that is very much associated with the issue of safety and health awareness. In an effort to promote the development of safety and healthy workplace, as it is one of the important functions between the organization and workers to conduct their daily operation in a safe and correct manner. Workers have the high level of health and safety awareness that are able to conduct their work efficiently and professionally, where it possibly might to prevent accidents that occurred at the work related. In the work environment mishap happening during the everyday operations brings about hopeless scenario. So, when accident happens, it should always reported to the health and safety officer to ensure that instant action could be taken by the organization. Encourage assessment could be led to recognize the factors that reason of accident and so in the future to prevent the accident. A worker additionally earnest to report any near miss accident or injury either supervisor or health and safety officer. This paper helps to identify potential hazards happen in different sector, special focus on manufacturing sector and also address the different occupational accident and diseases lungs, skin and muscular disorder and in the future so that avoid accident and disease for the betterment. [4-5].

This review anticipated that would raise the level of awareness towards wellbeing of health and safety needs at workplace. Furthermore employers or supervisors for most part can recognize what are the causes that play important role accident among their workers and can take the protection measures in controlling them. [6].

2 Safety culture and Problems in the Malaysian Manufacturing Sector

These days, safety culture has turned into the key factor determining the association's wellbeing execution safety performance. Safety culture plays an important role to deciding the organization's success or failure. The role of safety culture also play among the others targeted organization towards outstanding safety performance. In Malaysia, there are different categories of manufacturing industry. There are the different kinds of industry such as textile, petrochemical automotive, plastic, wood based, electronics and many others. As most of accident were occur by the unsafe performances at their workplace, so it's very important that good attitude s should be possessed by individuals in order to exhibit safety behaviors [7-8].

For this situation, safety culture gives direction to the workers to understanding the importance of working environment with safe workplace. Safety culture organization promote belongingness, trust and participation among the worker through their cohesiveness and membership. They remind each other on the significance of safety and encourage communication through teamwork. In additional safety culture offer them for the guidance of safety practices in the organization and also provides the share values and beliefs that assist workers to realize organizational safety. Furthermore to propagate safety information for launching communication networks and safety activities, it emphasizes on broad participation by employees. It keeps up a fundamental concentrate on the interior authoritative safety standard. In an association with wellbeing safety trends, working

environment safety has never been traded off with efficiency. Pioneers lead the laborers by showing safety is an incentive to them and to the association. They convince that the working environment is safe for the staff to perform their responsibilities. In this way, workers will have more sureness to do their duties and they can also enhance the productivity. As far as molding individual wellbeing practices, safety culture supports the display of wellbeing consistence and safety interest conduct. It advances wellbeing in the feeling of strengthening and self-belongingness.

Table # 1 respectively present the total number of accidents and by types of accident in Malaysia during 2012 to 2016. There was significant increase in the total number of accidents reported for all sectors, increase 24.90% from 2780 in 2012 to 3702 in 2016. There was also significant increase in the total number death and non-permanent Disability respectively reported for all sectors, increase 20.4% from 191 in 2012 to 240 in 2016 and increase 28.9% from 2382 in 2012 to 3348 in 2016. There was significant decrease in the total number of permanent Disability reported for all sectors, Decrease 43.7% from 207 in 2012 to 144 in 2016[9-13].

Table 1. Number of Report accident 2012-2016

Years	Total Accident Reported	Death	Permanent Disability	Non -Permanent Disability
2012	2,780	191	207	2,382
2013	2,826	185	165	2,476
2014	2,805	204	145	2,456
2015	3,344	213	122	3,009
2016	3,702	240	144	3,348

Among all sectors, Table #2 the number of accidents reported for the manufacturing sector has been the highest throughout the period since increase 26.2% from 1722 in 2012 to 2333 in 2016 . This reflects specialists in the manufacturing area are presented to high accidental dangers. It can be watched that the pattern of accident reports varies from one sector to another sector, reflecting the difference of hazard crosswise over all sectors.

Table 2. Industrial accidents reported by sectors, Malaysia, (2012 to 2016)

Sector	2012	2013	2014	2015	2016
Manufacturing	1,722	1,655	1,667	2,040	2,333
Mining and Quarrying	42	35	62	39	25
Construction	177	164	172	237	233
Agriculture, Forestry, Logging and Fishery	446	535	492	480	471
Utility	94	108	70	96	75
Transport, Storage and Communication	95	93	102	131	130
Wholesale and Retail Trade	73	78	83	108	109
Hotel and Restaurant	15	20	57	62	90
Financial, Insurance, Real Estate and Business Services	62	71	74	119	126
Public Services and Statutory Bodies	54	67	26	32	110
Grand Total	2780	2826	2805	3344	3702

During 2011 to 2016 Table # 3, the statistic of occupational accident in Malaysia illustrated that the first highest non-permanent and permanent disabilities were recorded in manufacturing industry (DOSH Malaysia, 2012 to 2016) and second highest Death/Fetal accident were also recorded in manufacturing Industry (DOSH Malaysia, 2011 to 2016).

There is significant increase in the total number of non-permanent Disability in manufacturing industry reported for all sectors and increase from 1535 in 2012 to 2187 in 2016 with an increment of 42.5%. Also there is a significant increment in the total number permanent Disability in manufacturing industry as compare to other sector.

While the total number of permanent Disability in manufacturing industry reported for all sectors having a decrease from 147 in 2012 to 74 in 2016 with a decrement of 49.7%. But an increment in the total number Death in manufacturing industry has been reported with numbers from 40 in 2012 to 72 in 2016 by 80% increment.

Table 3. Industrial occupational accidents categories (D, PD & NPD) reported by sectors, Malaysia, (2012 to 2016)

Sector	2012			2016		
	D	PD	NPD	D	PD	NPD
Manufacturing	40	1,535	1,535	74	2,187	2,187
Minning and Quarrying	7	32	32	0	21	21
Construction	67	98	98	5	129	129
Agriculture, Forestry, Logging and Fishing	38	382	382	9	437	437
Utility	5	86	86	4	69	69
Transport, Storage and Communication	22	68	68	2	115	115
Wholesale and Retail Trade	4	63	63	4	105	105
Hotel and Restaurants	0	14	14	2	85	85
Financial, Real Estate and Business Services	4	55	55	11	99	99
Public Services	4	49	49	3	101	101
Total	191	2,382	2,382	114	3,348	3,348

As per the record from DOSH Table # 4 show that in last 5-Years, the increment in the fatal accidents by Average 26% , Permanent Disability by Average 71% and Non-Permanent Disability by 64 % are investigated only in Manufacturing Industries.

Table 4. Industrial accidents of Manufacturing sector last five years (2012 to 2016)

Year	Death (D)			Permanent Disability (PD)			Non-Permanent Disability (NPD)				
	Total	MFG	%	Total	MFG	%	Total	MFG	%		
2012	191	40	21	207	147	71	2,382	1,535	64		
2013	185	58	31	165	128	78	2,476	1,469	59		
2014	204	45	22	145	112	77	2,456	1,510	61		
2015	213	46	22	122	89	73	3,009	1,906	63		
2016	240	72	30	114	74	65	3,348	2,187	65		
Average % of 5 Years (D)			25%	Average % of 5 Years (PD)			75%	Average % of 5 Years (NPD)			64%

In this way, accident and their results keep on being a noteworthy general for public health concern. Moreover, the Occupational Safety and Health Act (OSHA) 1994 expressed that the self-direction idea was declared in view of the essential duty of ensuring safety, wellbeing and welfare of all people at all work environments. In this way, a presentation of safety culture can be viewed as an orderly arrangement towards the foundation of zero accident in the working environment [14].

3 Occupational disease

Manufacturing industries in Malaysia give most extreme consumer loyalty ceaselessly experience advancements. These developments in new developing innovation that has prompting greater progression in modern assembling forms with a subsequent increment the field of industrial manufacturing with resulting new growing technology has leading to new type of disease impact on human health [15]. The more up to date sorts of work related diseases, illnesses and injuries are also developing without the labors been realizing that new innovation brings new health issues [16-17].

Depicted occupational health as the progression and safety of the most elevated level of mentally, physical and social prosperity of specialists in all occupations. Manufacturing industries are emphases on the raw materials and that raw material convert into finish product that goods will be fulfil customer satisfaction according to their needs. So diseases occur during the process manufacturing of raw material convert into finish product also generate term as industrial disease. As occupational health and safety focus on two expect Health and safety, health associated free from diseases and safety associated free accident or injury happen during the manufacturing.

Epidemiologic reviews have credited overabundance work related deaths, sicknesses, diseases and injuries due to related manufacturing industry [18].The expanding rate of fatalities because of work related occupational disease and sickness is a reasonable sign that worker are not completely aware of the potential source occupational disease and sickness related with poor health practices in their work related environment [19].Another work related wellbeing estimation for cases with days from work is musculoskeletal disorders (MSDs) [20].

Many of the worker working without health care hazard exiting in their work related area [21]. Industries laborers are likewise disregard of the obligations in term of health care because of the carelessness of employer and administration group. This is the poor work related health practices existing in the Malaysia manufacturing industry.

In 2015, a total of 5960 cases of occupational disease and poisoning have been reported to the Occupational Health Division as compared with 2648 cases reported in the year 2014

as Table # 5. This shows an increment of 55.57 % in occupational disease and poisoning. A sum of 4034 cases have been effectively examined for the purpose of carrying out improvements to the workplace in terms of occupational health. An aggregate of 3377 instances of work related diseases that were investigated were of noise-induced hearing loss (NIHL) and the disease is still the most common occupational disease experienced by workers (83.7%) as compared with other diseases. This was trailed by work-related musculoskeletal diseases, i.e. a total of 147 cases (4.4%) and occupational lung diseases, of 91 cases (2.3%) were investigated in 2015 as shown in Table. 6. Diseases caused by physical agents were the least investigated diseases by the Division whereby no cases were investigated in 2015.[22] [23]

Table 5. Statistic of Occupational Poisoning and Diseases from the Year 2012 – 2015

Years	Number of Occupational Diseases Cases
2011	1,198
2012	1,792
2013	2,588
2014	2,648
2015	5,960

Table 6. Statistics of Occupational Poisoning and Diseases by Type of Diseases for the Year 2015

Sr.No	Type of Diseases	Number of Cases Received	Number of Cases Received %	Number of Cases Investigated	Number of Cases Investigated %
1	Occupational Lung Diseases (OLD)	126	2	91	2.3
2	Occupational Skin Diseases (OSD)	46	1	27	0.7
3	Occupational Noise Induced Hearing Loss (NIHL)	5,366	90	3,377	83.7
4	Occupational Muscular - Skeletal Disorders (OMD)	249	4	147	4.4
5	Occupational Poisoning	32	1	27	0.7

Sr.No	Type of Diseases	Number of Cases Received	Number of Cases Received %	Number of Cases Investigated	Number of Cases Investigated %	Total Number of Cases
6	Disease cause by Physical Agent	5	0	0	0.0	4,034
7	Disease cause by Biological Agent	73	1	52	1.3	
8	Occupational Cancer	3	0	2	0.0	
9	Psychosocial Disorders	2	0	1	0.0	
10	Other Types of Occupational Diseases	19	0	6	0.1	
11	Non Occupational Diseases	39	1	304	7.5	
		5,960				

Investigation of work related diseases and poisoning by sector revealed that the manufacturing sector noted that most number of cases of work-related disease and poisoning in 2015, a total of 3487 cases (86.4%). This was followed by the public service sectors, of 147 cases (4.4%) and the agricultural sector, a total of 122 cases (3.0%) As shown in table # 7. The Occupational Health Division also investigated ex-gratia compensation cases for occupational disease confirmation purpose for the government employees and a total of 38 cases have been successfully investigated for the year 2015 as shown in Table # 8.

Table 7. Occupational Disease and Poisoning By Sector Dosh 2015

Sr.No.	Sector	No. of Cass	%
1	Manufacturing	3,487	86.4
2	Mining and Quarrying	109	2.7
3	Construction	5	0.1
4	Agriculture, Forestry, Logging and Fishery	122	3.0
5	Utility	77	1.9
6	Transport, Storage and Communication	17	0.4
7	Wholesale and Retail Trade	4	0.1
8	Hotel and Restaurant	14	0.3
9	Financial, Insurance, Real Estate and Business Services	50	1.2
10	Public Services and Statutory Bodies	149	3.7

Table 8. Occupational Disease and Poisoning (Ex Gratia) By Type of Diseases DOSH 2015

Types of Occupational Diseases	No.
Occupational Lung Diseases	22
Occupational Muscular - Skeletal Disorders (OMD)	2
Occupational Skin Diseases	1
Diseases Caused Biological Agents	3
Other Occupational Diseases	1
Non Occupational Diseases	9

A decent national OSH framework is basic for the powerful execution of national strategies and developers to strengthen the avoidance of work related diseases; it should be incorporate [24]:

1. Laws and regulation and, where proper, aggregate understandings joining the counteractive action of work related diseases;
2. Law obedience instruments, including viable OSH investigation frameworks;
3. Participation amongst administration and laborers and their delegates in the usage of OSH measures;
4. Providing of occupational health facilities;
5. Satisfactory components for the accumulation and investigation of information on occupational diseases;
6. Occupational health and Safety information and training;
7. Collaboration between departments of Labour, department of health and social security schemes covering work-related injuries and diseases.

4 Conclusion

In conclusion, research on occupational accident in Malaysia is generally lacking and needs to be strengthened. Future research should focus on high-risk industries (manufacturing, construction, agriculture and transportation). Future occupational management systems and the role of a safer design of the environment including equipment and machinery. The

effectiveness of OSHA should be evaluated and measures to further implement it should be developed. Comparative research into the effectiveness of occupational safety practices in our country with other developed nations will be helpful.

Despite more than 18 years have passed since OSHA was first implemented in Malaysia, there has been no revision done on OSHA. Since Malaysia is a fast growing country since the last three decades, there are certain provisions that may no longer be compatible with current situation. For example, in the manufacturing industries, new machineries with new technologies have been introduced which consequentially requires some of OSHA's provision to be revised.

For government, industry administration and workers an improvement in occupational safety and health is needed. Mishaps at the job environment ought to be kept with the participation from both managers and representatives on top of customary authorization from the legislature. Occupational accidents are avertable and occupational accidents can be omitted through proper safety measures. Compared to disabilities in terms of non-permanent are less likely as compared to permanent disabilities and deaths.

The administration, staffs and DOSH must consolidate strengths and attempt to forestall future occupational accidents by tending to the underlying reason of accidents. To develop a good safety trend at workplace, the rules from government, employer and workers need to combine together.

Malaysia aimed to reduce the occupational accidents, however; the results show by DOSH increase that Occupational Noise Induced Hearing Loss 83.7%, occupational musculoskeletal diseases, 4.4% and occupational lung diseases 2.3%. But the as per the record from DOSH that in last 5-Years, the increment in the fatal accidents by Average 26%, Permanent Disability by Average 71% and Non-Permanent Disability by 64 % are investigated only in Manufacturing Industries. The government must show their high interest on such a vulnerable employees to accomplish the above aim. This step will be helpful for planning to reduce the accidents in workplaces and it will also detect the prevention for the future accidents.

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