

## **CHAPTER ONE: BACKGROUND**

### **1.1 INTRODUCTION**

The state for an individual being unaware of what will happen to his or her surrounding that may result in minor, major injuries, diseases or even deaths is what we may refer or call to as accidents and these do happen. Having a safe, comfortable average office environment is best for office workers to perform their duties, however for construction workers is totally a different story.

According to Gould & Joyce (2002) (p. 381) that on a construction site, workers are responsible for cleaning up, toilets are portable units that sit outside, and there are often no roofs or walls, and the temperature inside is very close to the temperature outside. In such environments, provisions for health and safety take on new meaning and therefore all participants in a construction site must then cooperate in order to meet simple safety and health needs.

Construction works or activities in a construction site, regardless to its scale and nature of the scope of works required (large/ small) or whether it is new works, alteration works, extension works and even demolition works it involves plenty physical activities. The various groups of men and women who are employed to carry out different activities for which we may say that in a construction site sector, the probability of accidents or incidents may occur is quite high due to its exposure in such hazardous environment.

Mroszczyk (2015) stated that construction industry remains a risky industry for workers to work in. These series of accidents at construction sites happens due to various reasons. According to Pinto *et al.*, (2011) the reasons why construction is risky because of such a tough environment and outdoor operations where workers are exposed to dust, noise, vibration, also they deal manually in handling materials and performing there works on heights. Furthermore, Gould & Joyce (2002) (p. 381) also stated that it involves digging deep into tunnels , trenches and working with hazardous substances that put construction workers at risk.

In South Africa construction industry, Othman (2012) identified one of the leading causes of non-adherence to Health and Safety regulations on construction sites lies with the top management. However Mroszczyk (2015) argued that each stakeholder has a role to play in a strategic effort to reduce hazards and causal factors. These are design professional, general contractors, subcontractors, workers or even owners of the project.

Previous studies has been done with regards to improvement of Health and Safety (H & S) issues at construction site, hence the statistics for accidents remains at a higher number. International Labour Organisation estimates that around 2.02 million people die each year from diseases or work-related accidents. A further estimation of 317 million people suffer from work-related diseases, and there are an estimated 337 million fatal and non-fatal work-related accidents per year. (ILO, 2018). Prior to this Troy (2014) specified that in the United States

construction industry alone, more construction workers (849) were killed on the job in 2012 than in any other industry.

In response to the nature of the construction site also can be said as a factor on the management of safety sites. Prior, workplace injuries is unpredictable of happening at any time, and the need to prevent or to minimise this from trendy lies only within all stakeholder's approaches towards safety throughout the construction life cycle that is from the initiation phase of the cycle right to the completion of closing phase.

Therefore in this research, the researcher tried to examine and explore the practices of Health and Safety Management in construction site in Fiji which can contribute to help in understanding the knowledge of site safety management. As term generally in Fiji "Occupational Health and Safety" (OHS) is denote to safety of workers at respective workplaces.

According to Ministry of Employment (2017), the meaning of the terms "Occupational Health and Safety" and "Occupational Health Services" are looped into:

- OSH / Occupational Safety and Health in view of ILO Convention No. 155
- OHS / Occupational Health Services in view of ILO Convention No. 166

OHS is an act in the constitution of the Republic of Fiji under the legislated HEALTH AND SAFETY AT WORK ACT (HASAW ACT, 1996), which was amended in 2003.

Fiji Islands is a lower - middle income Pacific Island Nation, which constitutes a country of more than 330 isles with a population of 884,887 people in 2017. 57.1% of Fiji's population are in the workforce, with a majority of 76.4% males and 37.4% females. (Fiji Bureau of Statistics, 2018) A 5.7% higher than the persons enumerated in 2007 as shown in the Table 1 below.

**Table 1 : Total Population by Urban and Rural 1976 - 2017**

Census Year	Population	Annual Growth Rate (%)	Medium Age (years)	Urban	%	Rural	%
1976	588,068	2.1	17.8	218,495	37.2	369,573	62.8
1986	715,375	2.0	20.6	277,025	38.7	438,350	61.3
1995	775,077	0.8	21.2	359,495	46.4	415,582	53.6
2007	837,271	0.7	25.1	424,846	50.7	412,425	49.3
2017	884,887	0.6	27.5	494,252	55.9	390,635	44.1

Source: (Fiji Bureau of Statistics, 2018)

According to Fiji Bureau of Statistics (2017), a total of 593,620 persons (aged 15 and over of which 346,214) were in the labour force giving Fiji's Labour Force Participation Rate of 58.3%. From the Labour Force Population of 346,214, a total of 263,463 persons were engaged in money work.

The overall Urban and Rural share of workers is about even with rural numbers dominant in the following industry groups; a) Agriculture, Forestry and Fishing (83.2%). b) Arts, Entertainment and Recreation (76.2%). c) Activities of Households (71.1%) (Fiji Bureau of Statistics, 2017)

Further details are presented in Table 2 below.

**Table 2: Persons Working by Major Industry Group**

Industries	Urban (Men)	%	Rural (Men)	%	Total	% to Total
Agriculture, Forestry and Fishing	10,543	16.8	52,293	83.2	62,836	19.2
Mining and Quarrying	1,348	64.5	741	35.5	2,089	0.6
Manufacturing	12,653	70.8	5,226	29.2	17,879	5.5
Electricity, Gas, Steam...	913	75.9	290	24.1	1,203	0.4
Water Supply, Sewerage , Waste Management	993	64.1	556	35.9	1,549	0.5
Construction	14,912	61.4	9,381	38.6	24,293	7.4
Wholesale and Retail	37,331	65.8	19,382	34.2	56,713	17.3
Transportation and Storage	14,191	66.7	7,085	33.3	21,276	6.5
Accommodation and Food	7,940	54.2	6,696	45.8	14,636	4.5
Information and Communication	957	78.8	258	21.2	1,215	0.4
Financial and Insurance	3,674	90.8	372	9.2	4,046	1.2
Professional, Scientific	7,724	82.2	1,675	17.8	9,339	2.9
Administrative and Support Services	6,645	62.4	4,008	37.6	10,653	3.3
Public Administration	11,501	78.3	3,194	21.7	14,695	4.5
Education	9,552	60.1	6,352	39.9	15,904	4.9
Human Health and Social Work	4,993	75.7	1,605	24.3	6,598	2.0
Arts, Entertainment and Recreation	948	23.8	3,037	76.2	3,985	1.2
Other Service Activities	3,836	57.1	2,887	42.9	6,723	2.1
Activities of Households	14,588	28.9	35,916	71.1	50,504	15.4
Activities of Extra – territorial Organizations	807	92.9	62	7.1	869	0.2
<b>Total</b>	<b>166,049</b>	<b>50.8</b>	<b>161,016</b>	<b>49.2</b>	<b>327,065</b>	<b>100</b>

Source: (Fiji Bureau of Statistics, 2017)

Fiji has two main large islands and both the two main cities are located in one of the main island called Viti Levu. The capital city which is the largest (Suva ) is located on the southeast coast of the island of Viti Levu, in the central division whereas the second largest city (Lautoka) is located in the west side of Viti Levu in the western division.

*“Expect a lot of developments opening or continuing in a big way. The significance of these developments are not alone just because of its magnitude but because of the fact that their very existence contributes to our economy. It means,*

*be it direct or indirect, these developments enable breadwinners to put food on the table for their families. It means it sends our children to school, opens up small and micro enterprises, and in all essence, churns the economy. It means innovation and technological ideas are being introduced to Fiji which puts our nation at the centre and the true hub of the South Pacific. It means that this money goes towards our revenue coffers and this can be generated for more Government development expenditure, on infrastructure and others. It means that from the construction sector to the airline industry, somebody is exchanging money, a bank account is for the first time being opened, a person's superannuation fund accumulates and so much more. It means, without getting into an economist's jargon arena or the accountants complex calculations to get a balance sheet, this is how the economy works.”<sup>1</sup>*

Construction Business and sector in Fiji is growing and also changing. The above statements mentioning how Fiji economy will be benefited from the proposed construction projects inline, as highlighted on (Table 2) for construction industry in Fiji, 61.4% out of the 7.4% total population are engaged with 'construction works' in the urban sector. This leaves a 38.6 % share of workers in the rural areas which imply that most of the development works are carried out in the urban areas in Fiji.

To add on to that, a study conducted by Gani (2010) mentioning that services sector in the Pacific Island countries is growing. The author said that this

---

<sup>1</sup> The Fiji Sun : Daily Newspaper January 3<sup>rd</sup> , 2015

growth has therefore provided employment for a significant proportion of the domestic labour force.

*“There is excitement in the air in the west because there is so much activity in the building and construction industry and the demand for workers is huge. This activity is generated basically by tourism industry related construction, reservation and development projects. Almost anyone who wants a job can get a job and contractors are scouring the bushes for more men.”<sup>2</sup>*

With such development that are proposed and is in place, construction industry will be growing rapidly in the coming year in Fiji. It will involve a larger number of workers to participate and engaged in the various projects.

## **1.2 PROBLEM STATEMENT**

Demands to create employment in the construction industry sector will be high at stake. The concerns are safety of these sites and workers that will be an issue to discuss, and with this research outcome, it could contribute to its successful management. Nevertheless, Ministry of Employment, (2018) in Fiji reported a total of 843 workplace injuries. (Refer to Table 3 below)

On the report a total of 88 cases are from the construction industry sector. With that, it falls into the five most top leading working industry that accounted most workplace injuries in Fiji. It sounds enquiring and raises concerns on how is safety being practice in parties engaged in various construction projects in Fiji. It

---

<sup>2</sup> The Fiji Sun : Daily Newspaper September 16<sup>th</sup>, 2017

can be seen that no one can run away from the fact of having accidents or workplace injuries. It all goes back to how safety is managed in workplaces.

**Table 3 : Total number of workplace injuries reported through OHSF1 disaggregated by industrial classification**

<b>INDUSTRY</b>	<b>NUMBER</b>	<b>%</b>
A – Agriculture, hunting and related service activity	73	8.74
B – Fishing	16	1.92
C – Mining & Quarrying	2	0.24
D - Manufacturing	118	14.13
E – Electricity , Gas and Water Supply	104	12.46
F – Construction	88	10.54
G – WRT	171	20.48
H – Hotels and restaurants	60	7.19
I – Transport ,storage and communication	45	5.39
J – Financial intermediation	48	5.75
K – Real Estate, renting and business activities	37	4.43
L – Public administration and defence	55	6.59
M – Education	11	1.32
N – Health and Social Work	2	0.24
O – Other community services activities	3	0.36
P – Activities of private households	0	0.00
Q – Extraterritorial originations and bodies	2	0.24
<b>Total</b>	<b>843</b>	

Source : (Ministry of Employment, 2018)

Construction site or construction industry sector consists of different trade workers from different professional backgrounds and life. Regardless to the type of projects the most common tradesmen's are carpenter, electrician, operator, steel fixer, plumber, welder, pipefitter, painter and labourers. As mentioned that these man and women participate in a vast variety of physical activity work to ensure that at the end of the day, the required work is safely done and completed.

Fear on this national growth, demand for construction workers and despite of having the Occupational Health and Safety legislation, (HASAW Act, 1996) in



the constitution of the Republic of Fiji, workplace accidents still occurs around various workplaces in Fiji. The act is a Legislated Law. Bahron, Shaari, & Eranza (2013) mentioned that Act requires a joint effort. This joint effort is from the employers and employees on how to administer the safety and health at their respective workplace. Simply it means that H&S is not only the involvement of a one sided party, it has to be a joint venture with all stakeholders throughout the process.

Getting hurt is considered as one main common physical accidents that usually happens in the construction site compared to ones which are classified to be sever physically which may leads to long term injuries, sickness or deaths. Not only have the victims suffered, in this case others also affected. Apart from injuries, the morale of workers suffers as well when a work colleague gets injured. Feeling guilty of not happen to prevent the accident; being worried about the welfare of the victims, and afraid of being injured themselves are some of the side effects problems when accidents triggered at the site.

In addition, Reddy *et al.*, (2013) conducted a population based study on Workplace Injuries in Fiji acknowledging the likely underestimation of the overall burden of workplace injuries. Based on the research finding the author has support the need to identify context-specific risk factors and effective approaches to preventing workplace injuries in Fiji. The authors further suggested that there is an urgent need to review existing legislation, policies, resources and systems related to OHS to provide information and direction to implement effective strategies to prevent workplace injuries and diseases in Fiji.

Based on these previous research suggestion and findings therefore, this research paper raises few research questions for research consideration, on site safety management at construction parties involved in the construction industry in Fiji. Firstly, what are the current H&S safety practices at construction site in various ongoing projects? Secondly, what are some of the problems related to safety practices that resulted to unsafe acts in the site? Lastly, what are the strategies being used to minimise safety practice related problems?

### **1.3 THE PURPOSE OF THIS STUDY**

Previous researches show that construction sites remain a dangerous working environment. Prior to this, few studies have suggested that there is a need to identify risk affecting factors of prevention of workplace injuries. Fiji's construction sector and the nation's economy is benefiting from huge developments that are inline.

The purpose of this qualitative study is to investigate safety management aspects in occupational health and safety in ongoing construction projects on selected construction sites located in the urban area within the Central Division of the Fiji Islands.

Construction sites and workplace injuries are seen as a wider picture in this study, therefore this research focuses in exploring site safety management in construction projects with its aim to contribute to help in the understanding the knowledge of site safety management.

Correspondence to the research questions mentioned in the problem statement, the objectives of this study therefore focuses on the following:

- (i) To identify the current safety practice,
- (ii) To identify the problems related to safety practices
- (iii) To identify the strategies to reduce the safety practices related problems.

#### **1.4 SIGNIFICANCE OF THIS STUDY**

The importance of exploring the site safety management in construction projects will enable future researches to identify and fully understand the level of awareness and compliance of parties involved in construction, what are some factors resulted to problems occurs within the sites and the strategies that could minimize workplace injuries in the construction industry.

Overall as mentioned above, the construction sector is growing, therefore this research findings will contribute and can be used as a baseline theory or source of reference to various government and non – government construction departments on the aspects of site safety management not only towards the construction industry within the Central Division but the economy as a whole.

## **1.5 SCOPE OF THIS STUDY**

The scope of this study focuses on active construction projects on selected construction sites located in the urban area, central division within the Fiji Islands. The study looks into the various aspects of safety management at construction focusing on the safety practices; the safety practices related problems and the strategies to reduce safety practices related problems. The respondents for this study are Safety Managers, Safety Officers, or Safety Representatives of the selected construction companies who deals with safety aspects within the construction site.

## **1.6 THE STRUCTURE OF THE THESIS**

This research study is organized in five chapters. Chapter one gives the introduction to the subjects, the background, and the problems. Chapter two reviews previous literatures related to the topic of this research. The methodology is covered in chapter three while the results and discussion is presented in chapter four. The conclusion and suggestion made for this research study is provided in chapter five.