

**WORKER CHARACTERISTICS AND COMPLIANCE TO OCCUPATIONAL
HEALTH AND SAFETY. A STUDY OF NAJA DAVID WOOD INDUSTRY LIMITED
IN KUMASI METROPOLIS.**

By
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DECLARATION

I, Elizabeth Adwoa Kwankye, hereby declare that this thesis, ‘An assessment of the health and safety policy in the wood industry. A study of Naja David Wood Industry Limited in Kumasi Metropolis’, consists entirely of my own work produced from research undertaken under supervision and that no part of it has been published or presented for another degree elsewhere, except for the permissible citations/references from other sources, which have been duly acknowledged.

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DEDICATION

To my husband, Samuel Sarpong

My son, Nhyira Kwesi Afriyie Sarpong

My daughter, Nana Ama Ntiwah Sarpong

My mum, Elizabeth Owusu

And my dad, Francis Kofi Owusu.

KNUST



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ABSTRACT

Several studies have been conducted on occupational health and safety in the wood processing industries in Ghana and elsewhere. The reports of these studies indicate that wood workers are exposed to various types and degrees of occupational hazards ranging from bacterial, viral and chemical infections to physical injury and accidents. In Ghana, it is a known fact that there is no comprehensive national policy on occupational health and safety except Act 651 of the Labour Act 2003 which enjoins employers not to expose their employees to conditions that would lead them to work related injuries or illnesses. Employees are also required by this Act to exhibit their duty of care in ensuring that they work as per the employers' standard operating procedures which must incorporate safety and health requirements. Notwithstanding the Act and efforts made by companies especially in the Ghanaian wood industry at ensuring that employees work in safe and healthy conditions, wood workers suffer or sustain a lot of hazards at work. These hazards have been chronicled in earlier studies but the questions which remained unanswered were: what health and safety mechanisms or specific policies are in place to regulate the activities of workers such that they do not fall victim to disasters? What characteristics of workers may lead them to violate company codes on occupational health and safety? These questions and many several others formed the bases for which a survey questionnaire administered among 150 respondents in the Naja David Group of Companies to find out the role of sex, age, education and experience on compliance or no-compliance to occupational health and safety. The results revealed that age, education and experience play significant role in ensuring compliance whereas sex does not play significant role in ensuring compliance to occupational health and safety. The results further indicated that unavailability and low usage of personal protective equipment (PPE) increase the risk of getting involved in accidents. The study thus, recommends constant provision and replacement of PPE for workers to use at work. Immediate supervisors should

also be officially empowered to enforce usage of PPE and punish violators as way of preventing accidents at work. Wood processing companies are also encouraged to print policies on safety and health in black and white and circulate it among workers for their education and information.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Globalization has facilitated a rapid increase in informal employment, and has been associated with the generation of employment that is often flexible, precarious and insecure (Lund and Nicholson, 2003). Current estimates show that informal employment comprises one half to three-quarters of non-agricultural employment in developing countries: 48 per cent in North Africa; 51 per cent in Latin America; 65 per cent in Asia, and 72 per cent in sub-Saharan Africa (Chen, 2002). With the exclusion of South Africa, the share of informal employment in non-agriculture employment in sub-Saharan Africa rises to 78 per cent (Chen, 2002), making this region the leader in the growing global trend towards the informalisation of labour.

In Ghana, the wood production sector contributes about 11 percent of foreign earnings; it employs over 100,000 workers and provides a livelihood for over 2.5 million Ghanaians (Acquah Moses 2002). Despite this contribution to Ghana's economy, the operations of the Wood Processing Industry (WPI) are generally associated with high levels of occupational hazards with consequent risk to health. Records at the Department of Factories Inspectorate from 1987- 1998 indicated that about 50 percent of fatal accidents in industrial sector came from the wood working sector in Ghana (Boateng and Nimako, 2000; MoH/GHS, 2002).

The major wood processing industries in Ghana are typically large capacity facilities such as large sawmills, plywood mills, pulp and paper plants and quite large numbers of small scale wood products; manufacturing companies such as furniture industries, cabinet makers and carpentry. Timber in Ghana comes mostly from the natural high forest zone of the country, in particular from the Asanti, Brong Ahafo, Eastern and Western parts of the country. The most

important wood products, produced, consumed and traded in Ghana are sawn-wood, plywood, particle board, news-print, printing and writing paper and other paper boards (Kraft paper).

Ghana has no national policy on occupational health services even though article 4 of the International Labour Organisation (ILO) Convention 155 (Occupational Safety and Health Convention 1981) requires the nation to give effect to the provisions of this convention. The aim of this policy is to prevent injury to health arising out of or linked with or occurring in the course of work. It requires each member state to formulate, implement and periodically review a coherent national policy on OHS at the work environment (Factories, Offices and Shops Act 651). A draft policy jointly developed by the Ministries of Labour, Health and Mines and Energy as far back as 2000 is yet to be adopted. The current National Labour Act 651 does not include any comprehensive provisions on occupational health and safety. There is no institutional facility for training of OHS professionals at the local levels. Training of OHS professionals has largely been at the mercy of donor organizations outside the country. The occupational health and safety (OHS) of persons employed in work places (with the exception of agriculture, rail and road transport) in Ghana are regulated by the Department of Factories Inspectorate. The Inspectorate is responsible for the promotion and enforcement of regulatory measures to give effect to the provisions of the Factories, Offices and Shops Act 651. However, there are other agencies such as the Radiation Protective Board of Ghana, Atomic Energy Commission, the Ministry of Health and Mines Department which play complementary role in the promotion, but not enforcement of O.H.S measures.

1.2 Statement of the Problem

Research on occupational exposures in the wood industry and related industries has suggested that workers in sawmills, lumber mills, plywood and particle board factories, and veneer plants are at high risk of developing lower respiratory diseases, allergenic disorders, cancer, and lung diseases (Amedofu, 2003).

By-products of wood processing, such as wood dust, mould, formaldehyde and noise are well known with respect to their health effects. In addition, workers in the industry have less knowledge about occupational health and safety, leading to low compliance of safety practices even though workers are being exposed to many harmful substances such as dusts, fumes, toxic chemicals and biological hazards such as acute and chronic infections, parasites and physical hazards including noise, heat, cold, vibration, inflammable materials and compressed air (Acquah-Moses, 2002).

They are also exposed to synthetic chemicals used in these woods. Most adverse effects caused by micro-organism associated with wood dust have an immunological background. The best known are those caused by moulds which may abundantly develop in suitable conditions on stored wood (planks, chips) as a secondary wood infection. The inhalation of large amounts of spores and mycelia fragment of fungi may cause in exposed workers strong antibody response and respiratory disorders or organic dust toxic syndrome (Boateng and Nimako, 2000).

Less is known about health effects of micro-organisms developing in stored timber logs as a primary infection of wood. Timber may become contaminated depending on kind of wood and conditions of storage, large quantities of diverse bacteria and fungi comprising

potentially pathogenic species. In Ghana various studies have shown the role of occupational exposure to environmental pollutants in the incidence of respiratory diseases (3).

High levels of noise have long been recognized by industrial safety technicians as unsafe to workers. In a typical wood industry, decibel levels often exceed industry limits and may cause hearing loss.

Currently, Ghana has no national policy on OHS. A draft policy document prepared in 2000 has not been processed for adoption, even though article 4 of the ILO Convention 155 (Occupational Safety and Health Convention, 198) requires the nation to give effect to the provisions of this convention.

Despite the clear risks involved in informal work, due to its unconventional nature and location, informal workers in most African countries especially Ghana are not protected by the institutions that officially govern occupational health and safety. Conventional OHS institutions have been designed to protect formal workers in formal work environments such as mines, factories, offices and shops, and so have no bearing on the working conditions of those who work in more unconventional settings. Part of the reason for this is that these institutions often take on narrowly focused, inflexible forms that are based on industrialised country models (Nuwayhid, 2004; Lund and Marriot, 2005). As a result, they bear little meaningful relation to the “complex, category-crossing” processes that characterize work in most African countries (Cooper, 1996).

Even though Ghana has no national policy on occupational health and safety, many organisations operating in the country have their codes and regulations enforcing safety at work. This notwithstanding, the reports of many studies indicate that wood workers suffer many and varied hazards. The existing problem that this study seeks to investigate is

compliance to occupational health and safety in the wood industry. Even though many apparent improvements have been achieved over the past few decades on occupational health and safety in Ghana, the focus has been on the formal sector neglecting the informal sector which actually employs greater percentage of Ghana's population.

1.3 Research Questions

The following research questions are raised to serve as guide and focus of the study:

1. What health and safety policies are in place at the factory?
2. Are workers in the factory provided with personal protective equipment?
3. What are the attitudes and behaviour of wood workers towards health and safety practices?
4. What kind of accidents are wood workers mostly exposed to?
5. What role does sex, age, education and length of service play in promoting compliance to safety rules among wood workers?

1.4 Research Objectives

Generally, the objective of the research was to examine the role of worker background in compliance to occupational health and safety policy and practice among workers in the Naja David Wood Industry Limited.

Specifically, the study was intended to:

1. Find the health and safety policies in place at Naja David Wood Industry Limited.
2. Identify the personal protective equipment available to workers in the company.
3. Investigate the attitudes and behaviours associated with safety practices among the wood workers.
4. Assess the types and frequency of work related accidents at the wood industry

5. Find out if sex, age, education and length of service play any role in ensuring compliance to health and safety rules at work place.

1.5.1 Hypothesis I

H1: There is a significant relationship between sex and PPE usage.

H0: There is no significant relationship between sex and PPE usage.

1.5.2 Hypothesis II

H1: There is a significant relationship between age and PPE usage.

H2: There is no significant relationship between age and PPE usage.

1.5.3 Hypothesis III

H1: Level of education and PPE usage among wood workers are significantly related.

H2: there is no significant relationship between level of education and PPE usage.

1.5.4 Hypothesis IV

H1: There is a significant relationship between length of service and PPE usage

H0: There is no significant relationship between length of service and PPE usage.

1.5.5 Hypothesis V

H1: There is a significant relationship between sex and involvement in accident.

H0: There is no significant relationship between sex and involvement in accident.

1.5.6 Hypothesis VI

H1: There is a significant relationship between age and involvement in accident

H0: there is no significant relationship between age and involvement in accident.

1.5.7Hypothesis VII

1.5.7H1: Level of education and involvement in accident are significantly related.

H0: Level of education and involvement in accident are independent.

1.5.8 Hypothesis VIII

H1: Length of service is a function of involvement in accident

H0: Length of service and involvement in accident are independent.

1.6 Significance of the Study

Although several works have been carried out in the area of occupational health and safety, there is still a gap which this study would fill especially providing local content of the problem. That is to say, most of the studies conducted on occupational health and safety are foreign based and as such available literature lack local context. The study therefore, significant insofar as it gathers and analyzes information in Ghana based industries.

The findings of the study would also add to the already existing literature in the field occupational health and safety especially in the informal sector. Therefore, future researchers can make use of the findings of the study in the form of literature review to enrich their researches.

Also, this study would be useful to policy makers with regard to work place health and safety issues. Policy makers can make use of the findings in policy formulation and implementation on health and safety practices for improved work situations.

Additionally, the findings which were based on well-crafted questionnaire and interviews would furnish organizations that are in work place health and safety advocacy such as trade unions with wealth of information to be used in designing programmes to educate and sensitize workers on the issues as well as utilized the information to advance the course of workers welfare.

The management of the Naja David Group of Companies would find the findings of the study particularly relevant in coming out with concrete health and safety practices for improved safety and health of workers in the company. This is because the analysis of data would be

more directly related to what actually pertains in the company in terms of employees' level of awareness of their health and safety policies, their attitude and behaviour towards such policies.

1.7 Scope of the Study

A study on the background of workers and compliance to occupational health and safety policies in wood processing factories could have been extended to many a factory in Ghana. However, due to time and resource unavailability the study would be limited to only workers of the Naja David Group of Companies in Kumasi. The content of the study comprises the background characteristics of workers such as age, sex, level of education and number of years of working experience. It also covers the types of personal protective equipment available, their usage by workers and the kinds of accidents occurring at the company if any. Furthermore, the study analyses the presence or absence of health and safety policy at the factory.

1.8 Profile of Naja David Group of Companies

Naja David Veneer and Plywood Limited, AG Timbers Limited and Ayum Forest Products Limited are the key companies forming the Naja David group of companies. The company is located in Kaasi industrial area, Kumasi. It is owned by a Lebanese called Naja David. The Company was incorporated in 1965 for the production of quality plywood, rotary veneer and lumber for export and local markets. The current labour strength of the company is about 1,645 workers consisting of managers, officers, supervisors, operators and labourers.

The production section is made up of five sections. These are the loggers and peelers, the dryers, the gluing section the boiler section and the fire section. The company contributes

nearly 20% of Ghana's wood production and export trade. It has a substantial investment in plant, resource development, its workforce and communities in which it operates. The group is committed to remaining in the forest and wood products industry and has achieved a credible position in the timber industry in Ghana.

The group has its own plywood sales and distribution outlets in Kumasi which caters for the right standard of the products on the domestic market and other West African countries. Naja David Group of companies is affiliated to Amerind Pty Limited Australia, Amerind Limited UK and Timb-Mak Export GmbH in Germany

1.9 Study Area

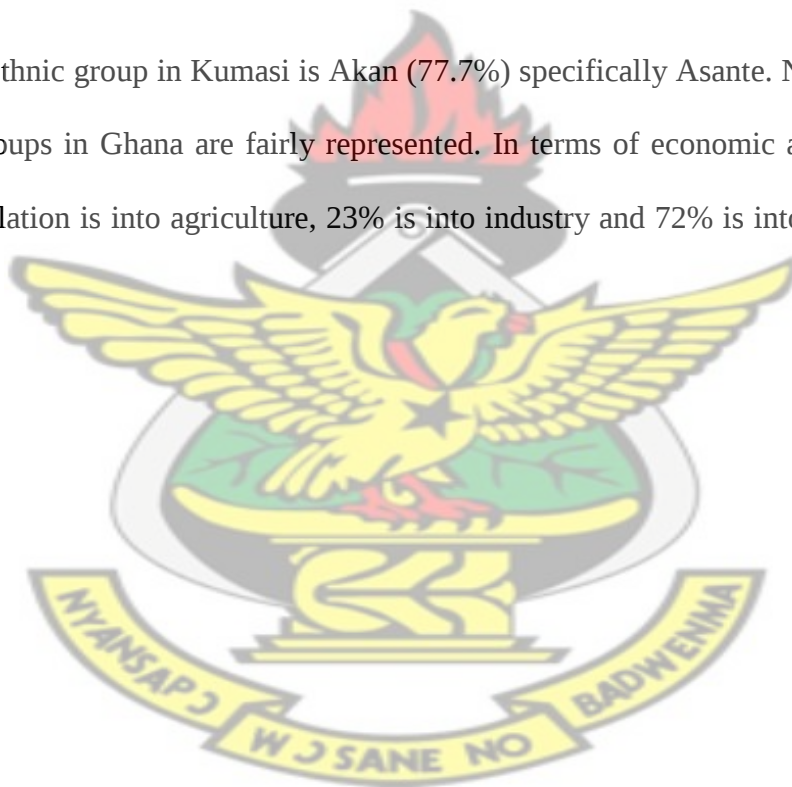
The study is set in the Kumasi Metropolis (regional capital of the Ashanti Region of Ghana), located in the transitional forest zone, about 270km north of the national capital, Accra. It covers a total land area of 254 square kilometers, stretching between latitude 6.35° – 6.40° and longitude 1.30° – 1.35° . Kumasi is bounded to the north by Kwabre District, to the east by Ejisu Juabeng District, to the west by Atwima Nwabiagya District and to the south by Bosomtwe-Atwima Kwanwoma District. The calm climatic condition (average minimum temperature of about 21.5°C and a maximum average temperature of 30.7°C) has precipitated the influx of people from every part of the country and beyond its frontiers to the Metropolis.

According to the 2000 Population and Housing Census Report, Kumasi accommodated a total of 1,170,270 people as of 2000, reflecting an inter-censal growth of 5.4% between 1984 and 2000. Unlike most of the districts and metropolises in the country and even the nation, Kumasi has a unique sex male/female ratio of 1:0.97. The 2000 census results revealed that 57.7 percent of the population constitutes the active population. The census report also revealed that 16 percent of the active population is unemployed reflecting economic

dependency ratio of 1:1.1. In terms of religion, Christianity is dominant (78.8%), followed by Islam (16%) and African Traditional Religion (0.3%). Nevertheless, about 4.2 percent of the population does not associate with any of these religious organisations.

The Metropolis has a total of 2325 educational facilities supporting the provision of formal education within the metropolis comprising basic schools, senior high schools (SHS), vocational and technical schools, training colleges and tertiary institutions. Basic education occupies most (96%) of these facilities. The private sector also plays a significant role in ensuring quality and easy access to education in Kumasi.

The dominant ethnic group in Kumasi is Akan (77.7%) specifically Asante. Nevertheless, the other ethnic groups in Ghana are fairly represented. In terms of economic activities, 5% of the active population is into agriculture, 23% is into industry and 72% is into commerce and service.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This part of the study consists of review of existing literature on the topic. A brief history of the concept of occupational health and safety was traced. Policy documents on occupational health and safety were examined. The role of labour institutions, work organisations, governments and employees in ensuring the awareness and enforcement of occupational health and safety policies and practices were also evaluated in this chapter. Finally, empirical studies conducted on the topic by earlier researchers in Ghana and beyond were equally reviewed in brief.

2.2 The History of Occupational Health and Safety Policy

The study of occupational safety and health has been in existence for as long as there have been structured work environments. Hippocrates (460-377 BC), for example, wrote of the harmful effects of an unhealthy workplace on slaves, and Caesar (100–40 BC) was reported to have an officer in charge of the safety of his legions (Pease, 1985; Weaver, 1980). This section traces the history of the various interventions developed to improve workplace safety.

In the midst of the Middle Ages, George Bauer (1492-1555) wrote several books on mining/metallurgy describing several innovative approaches for improving ventilation for workers in mining shafts (Raouf & Dhillon, 1994). And Bernadino Ramazzini (1633-1714), the father of occupational safety and health, also wrote on the safety aspects of mining as well as glass working, painting, grinding, and weaving. In *De Morbis Artificum*, or the *Disease of Workers*, Ramazzini (1713) was the first to document the deleterious effects of

working conditions on employees' health and studied the injury and death rates of many different occupations. Appreciative of the social importance of the progress and economic development of these occupations, Ramazzini discussed and suggested several preventive strategies for reducing occupational disease and injury (Pease, 1985; Pheasant, 1991; Raouf & Dhillon, 1994; Tayyari & Smith, 1997). Although these early safety *engineers* did not focus their energies on implementing intervention strategies in the workplace, they certainly laid the foundation for current approaches to reduce occupational illness and injury.

As the *machine age* dawned with James Watt and Eli Whitney during the late 1700s, employers accepted industrial injuries and deaths as part of the working conditions without considering the economic ramifications. Employees were seen as volunteers, and were plentiful and replaceable (Leigh, 1998). Although the conditions in the early factories were horrendous, with two thirds of the employees being women and children working 12-hour days, people would risk disease, dismemberment and death for employment and a method for providing food for their families. Even if an employee suffered an illness or injury, they would seldom report the sickness because serious or frequent illnesses were cause for dismissal (Heinrich, 1959; Weindling, 1985).

The history of occupational safety and health is vast and diverse, and therefore a comprehensive review is beyond the scope of this study. Therefore, this section of the literature review will focus on the major influences (i.e., government, insurance, engineering and psychology) and pertinent legislation that have shaped occupational safety and health intervention research.

2.3 Governmental Influence

As industrial centers grew, the degradation of living conditions increased and the death rate grew. In England, for instance, the first attempt of governmental intervention (1933) began with federally run factory inspections. Table 1 reviews significant milestones toward intervention development in occupational safety and health. The results of the scrutiny by governmental inspectors (most of whom were physicians) had little impact on the health and safety of employees until the mid-1800s when the Great Factory Act was initiated.

The Great Factory Act of 1844 improved England's factory conditions somewhat, but employers still saw no economic impact of an unhealthy or a risky workplace. In fact, the families of employees who died on the job had little legal recourse. At most they had their funeral expenses covered by the employer (Heinrich, et al, 1980). In 1880, England passed the Employers' Liability Act that made it possible for employees, or their families, to sue an employer for damages. This act made the employers more cognizant of the costs of not addressing the safety of their working conditions. However, the family still had the difficult task of proving the employee (or a fellow employee) was not the cause of his own death, was not aware of the hazard, or that the employer was negligent. Factory inspections and the current laws increased employers' awareness of occupational safety, but it was not until the worker compensation laws were passed that industry owners finally began to realize the costs associated with occupation injuries.

Worker compensation laws covered employee injury regardless of fault; but employees could no longer sue their employers under common law (third party lawsuits were still legal). Seemingly, the worker compensation laws were passed to protect employees. However, they

were actually passed to control the number of large lawsuits against employers, and thus enabling a “predictable cost of doing business” (Leigh, 1998, p. 254).

Hence, up to this point the most effective interventions for improving occupational safety and health appeared to be implementation of top-down governmental regulations. As Heinrich et al. (1980) point out, “Legislation is one process by which government affects safety. Judicial process is another. Together, they change the impetus for safety or create a new impetus, and the impetus is defined as time, money and effort” (p.361). Thus, regulations finally made it cost effective for employers to attend to working conditions that adversely affect employees’ health and safety, though they were not always in the best interest of the employee (Heinrich, 1959; Heinrich, et al., 1980; Petersen, 1989; Weindling, 1985; Wilson, 1985).

2.4 Insurance Companies: The First Safety Consultants

As the worker compensation laws created a need for industries to invest in additional insurance, insurance companies needed to assess their clients’ risks to assign proper rates. Thus, in the early 1900s, insurance companies created inspection departments. The inspectors would visit their policy holders to assess workplace hazards and assign the proper rate (i.e., *underwriting*). As these insurance inspectors gained valuable experience in looking for hazards in various industries, these *safety consultants* became the major impetus in organizational safety and health. During an inspection, for instance, if the insurance representative found a hazardous situation, he would make suggestions on how the organization could remedy the safety hazard and obtain a lower premium (also to control the insurance companies’ losses).

The insurance companies were serving the employer while at the same time trying to control their own losses. Consequently, the only safety concerns addressed by the insurance

inspectors were ones currently covered by Worker Compensation laws. Furthermore, once the insurance agent assigns coverage rates, there were several self-serving mechanisms to motivate employers to improve the safety of their workplace. Merit rating schemes (i.e., *scheduled rating*), for example, rewarded loss control and penalized high worker compensation claims. The scheduled rating system may have motivated many companies to *cover-up* or not report certain claims to insurance companies in order to avoid a penalty or keep their current coverage rate (Geller, 1996; Miller, 1997).

Whereas it seemed the early insurance companies were striving for a safer workplace, they were instead trying to control their own loss and motivate employers to address only hazards covered by Worker Compensation (Heinrich, et al., 1980). In fact, most of the insurance inspector's time and safety materials went to the larger companies who paid massive premiums, leaving out the mid-sized to smaller organizations. Insurance companies did develop safety guidelines and training materials that made an impact on health and safety. Nevertheless these interventions were guided by current governmental regulations and the need to control loss and not for the safety of employees.

2.5 Traditional Safety and Health Interventions: Three “E”S of Safety

From the early 1900s to the present time, employers and safety practitioners adopted the philosophy of the *three E's* (engineering, education, and enforcement) to guide their safety-related interventions (Geller, 1996; Guastello 1993; Heinrich, et al., 1980; Petersen, 1996; Wilde, 1998). To make a difference in the health and safety of employees, the three Es of safety focus on: 1) developing *engineering* strategies that decrease the probability of an employee engaging in at-risk behaviors; 2) *educating* and training employees regarding equipment, environmental hazards, policies and procedures; and 3) *enforcing* the policies and

procedures related to operating equipment, wearing proper personal protective equipment, and handling specific hazardous substances.

2.6 Occupational Health and Safety in Ghana

Employers in Ghana are required by the Ghana Labour Act 2003, Act 651 to ensure their employees are not exposed to conditions that would lead them to work related injuries or illnesses. Employees are also required to exhibit their duty of care in ensuring that they work as per the employers' standard operating procedures which must incorporate safety and health requirements.

The Nation has different agencies under different jurisdictions which monitor different industries for workplace and employee safety, however, there is no national body, policy nor process that govern Occupational Safety and Health management in Ghana. There is a Road Safety Commission but with little standards, guidelines and impact on the safety of the transport industry and the pedestrian. The Minerals Commission has the Mining Regulations 1970, which contains some guidelines in Occupational Safety and Health but just for the Mining Industry. There currently is a draft of the reviewed Mining and Minerals Regulations which is pending approval by the Ghanaian Parliament.

Numerous injuries, illnesses, property damages and process losses take place at different workplaces but due to under reporting or misclassification due to lack or thorough standards, or unfamiliarity with the existing guidelines, people are not normally in the known of such events as well as their actual or potential consequences and effective corrective actions required (Annan,2010).

There are currently two major edicts that have provided guidance in the provision of occupational / industrial safety and health services, practice and management in Ghana.

These include the Factories, Offices and Shops Act 1970, Act 328 and the Mining Regulations 1970 LI 665, but these have only driven the mining and the labour sectors and are therefore very limited in scope, given the multifaceted distribution of industrial operations that we have in Ghana. There is the Workmen's Compensation Law 1987 (PNDC 187) which relates to compensation for personal injuries caused by accidents at work and hence, indirectly impacts on monitoring worker / workplace safety. The Radiation Protection Board of the Ghana Atomic Energy Commission is also proactive in monitoring companies with radiation exposure hazards for compliance, however, due to limited resources, effectiveness of their activities is compromised (Annan, 2010).

There are other statutes which indirectly impact on Occupational Safety and Health and these include the Environmental Protection Agency Act 490 1994, the Ghana Health Service and Teaching Hospital Act 526, 1999 and the National Road Safety Commission Act 567, 1999.

Though, Ghana is among the 183 member countries of ILO, which requires, as per the ILO convention number 155 1981, that member countries formulate, implement and periodically review a coherent policy on occupational safety and health and work environment, Ghana has not yet rectified this convention and the nation has no established authority dedicated to Occupational Safety and Health to guide and facilitate the implementation of the "Action at the National Level" as indicated in the R164 Occupational Safety and Health Recommendation, 1981. However, the Labour Act 2003, Act 651, Part XV, sections 118 to 120 apparently directs employers and employees in their roles and responsibilities in managing Occupational Health, Safety and Environment in the nation, but is not specific about whom to report accidents and occupational illnesses to. It is not clear or does not specify what to consider as Occupational Illness. It

does not specify who to be responsible for ensuring the industries in Ghana implement corrective actions as per recommendations.

Currently, accidents that occur in factories are expected to be reported to the Department of Factory Inspectorate (DFI) but companies hardly report such events to the inspectorate for investigation and correction. When these accidents get reported, it takes a long time before corrective or preventive actions get implemented, hence, there is a little or no positive effect of the action of the DFI on the factories. The nation has seen some positive “Safety and Health practice infection” among some of our Ghanaian companies due to the influx of some multinational companies into the country, given their corporate expectations with specific requirements in Occupational Safety and Health practices. This stems from their requirements for the contractors, and subcontractors, some of whom are Ghanaian, to follow their Health and Safety standards.

In as much as this is a good effort and helps the Ghanaian to know there is more to Occupational Safety and Health than we have specified in our legal framework, it tends to confuse the Ghanaian the more with regard to which standard to follow in the nation, and what is required to make employees and employers accountable. In the academia, Occupational Health is not an option for specialization in a typical Ghanaian medical school. Safety engineering has not found its way into any of our Engineering curricula in Ghana yet. A potential intervention is the proposed Safety and Environmental Engineering program which is being expected to commence at the University of Mines & Technology, but this is not approved yet. All other Safety & Health training programs are run either by international agencies or some few Ghanaian organizations but none of these matches up to even a first degree (Annan, 2010).

2.7 Health Hazards in the Wood Industry

The World Health Organization (WHO) report 2000 notes that, occupational health risks are one of the leading causes of morbidity and mortality in the world in general and developing countries in particular. In India alone, research reports estimated an annual incidence of occupational disease between 924,700 and 1,902,300 cases and 121,000 deaths (Leigh et al, 1999). Numerous studies on many industries including the leather tanning industry, textiles and metalware have found that workers in these industries work in inhuman physical conditions for very long hours (Usha, 1984; Labour Bureau Reports 2000; 1998; 1996; 1992b; 1992a; Banerjee and Nihila, 1999; Nihila 2002).

A survey by Adei and Kunfaa (2005) revealed, that employees in the wood processing industry were exposed to physical, ergonomic, mechanical and chemical hazards. The perceived physical hazards in the study were sawdust, noise and extreme hot temperature. Sawdust was a major hazard in all the Wood Processing companies surveyed which is consistent with the work place health and safety hazards survey by the MOH (1998), that showed that wood dust and shavings were major hazards among woodworkers. The percentage of workers as the study maintains who were provided with nose masks and those who claimed to use it may be an over estimation. Apart from one small company surveyed, where all workers were seen wearing their nose masks, some workers in the rest of the companies surveyed had their nose masks on their foreheads because they found them uncomfortable to use.

Amedofu (2002) as cited in Adei and Kunfaa (2005) observed that hearing impairment usually develops slowly over a long time and the impairment can reach the handicapping stage before an individual becomes aware of what has happened. The researcher had to shout when administering the questionnaire to some of the workers at their administration block,

which were insulated from noise. This suggests that majority of workers were not aware of their hearing impairment. It therefore appears that where earmuffs were provided their use was not clearly understood.

Most supervisors and workers in the wood processing companies surveyed perceived noise as an inevitable part of the production process. The supervisors had no idea of the quantitative noise levels the workers were exposed to and only 6.5 percent knew that the maximum allowable noise limit for eight hour shift should not be more than the recommended levels by Environmental Protection Agency (EPA) in Ghana. Amedofo and Asamoah-Boateng (2003) showed that workers in sawmills, and corn mills were exposed to noise levels exceeding the recommended levels by Environmental Protection Agency (EPA) in Ghana.

Workers at the boiler and kiln dryer sections in the large and medium sized companies perceived their work environment to be hot. Workers at the boiler sections experienced profuse sweating although no temperature-monitoring equipment was in place. The companies with clinics (three large and one medium-sized) processing companies) had a record, complaints of fatigue, discomfort and heat exhaustion as a result of the excessive heat exposure. Ezeonu (2004), reported heat exhaustion caused by exposure to high temperature among kiln workers in a Nigerian company.

2.8 Health and Safety Practices

Records at the Environmental Protection Agency (EPA, Kumasi Office) revealed that two large and one medium-sized wood processing company out of fourteen companies had submitted occupational health and policies (OHS) in May 2004 as part of their Environmental Management Plan. The policy statement of these companies were not posted on the notice boards on their company premises neither could they be produced on request. The supervisors

and other workers in the three companies with OHS policy were not aware of the existence of the policy. It is difficult to see how a company's OSH policy could be effectively operationalized with general lack of awareness.

Matooane (1997) reported that in Lesotho, out of ten woodworking (four large and six small) industries in that country, only one small company had an OSH policy, indicating little commitment on the part of small companies. Personal Protective Equipment (PPE) was the main measure adopted to mitigate the effect of hazards in all the Wood Processing Industries. These were safety boots, overall coat, nose masks, ear protectors, goggles and gloves. Generally, apart from the PPE's not being adequate and not properly used, there was lack of enforcement in their use. The supervisors on the factory floor did not also wear Personal Protective Equipment (Odhiambo, 2003).

There appeared to be low administrative and engineering controls in companies because it appeared most managers perceived injured worker's replacement an easy option, and that insurance cover for injury was a sufficient protection for their workers and companies. Consequently, they perceived occupational hazards in the work place to be normal with their operations and, therefore, lacked the commitment to ensure safe healthy practices (Odhiambo, 2003).

In Ghana, an extensive study conducted by Boateng (1997) reported that 67 percent of Food, Drink and Tobacco (FDT) firms in Ghana, had safety committees, with membership made up of representatives from all departments except one drinking firms whose members were selected on the recommendation of the Department of Factories Inspectorate. There were no visible posters on safety in all the companies surveyed and in most cases where they had posters given by the Department of Factories Inspectorate, they were in the drawers of the managers. News letters on health and safety were also non-existent.

In Kumasi, a survey revealed that although some employees were sent to the Wood Industry Training Centre at Akyawkrom, to attend courses each year, the curriculum of the centre did not include OHS (Adei and Kunfaa, 2007). Adei and Kunfaa (2007) further disclosed that risk assessment was not undertaken at all times to ensure that the existing controls, training and safeguards are still performing their desired function. When performed it was mainly geared towards what was perceived to directly lead to increased productivity, or as a result of investigation of an accident by DFI. Consequently the workers and the employers do not derive the maximum benefit from risk assessment, which is a higher productivity and a healthier working environment and work force

2.9 Industrial Accidents

Results obtained from 1998-2003 at the Kumasi Metro Labour Department (KMLD) within Ashanti region was 175 cases more than that reported by the Department of Factories Inspectorate (DFI) for the whole country. Analysis of a researcher revealed that out of 185 accidents reported in 1999 only 16 (8 percent) of the total accident was reported for WPL while the KMLD reported 158 (64.7 percent) injuries for WPI in Kumasi metro in 2001, 40 (18.9 percent) out of 211 accidents recorded by DFI came from WPI. Whiles the KMLD recorded 145 (65.6 percent) injuries for the WPI out of 221 injuries recorded.

In 2003, 26 (18.9 percent) out of 137 accidents were recorded by DFI for WPI whiles KMLD recorded 176 total injuries and out of the 115 (65.3 percent) were from wood processing industry. Thus, the extent of under reporting of industrial accidents in WPI only, ranges from 360 to 980 percent. If this is extended to other sectors of the economy, then, there is no doubt that the use of DFI statistics which has been used extensively in the past would not provide compelling evidences of adoption of Occupational Safety and Health policy in Ghana.

It appears that the collection of workmen's compensation provided an incentive for the higher notification record of industrial accidents in the Wood Processing Industry at the KMLD (Ashanti). This may be explained by the key role the labour department plays in the collection of workmen's compensation for injured workers. There was no incentive to notify the DFI accidents even though Act 328 of Factories offices and shop Act 1970 section 10 stipulate the notification of accidents.



CHAPTER THREE

RESEARCH METHODS

3.1 Introduction

This chapter discusses the procedures and methods used for data collection and analysis. It includes a description of the study organisation, research design and the sampling procedure. Also discussed are the description of the methods and tools used for data collection as well as the field problems encountered and ethical considerations.

3.2 Sources of Data

The study uses both secondary and primary sources of data. Secondary sources are data that already exists such as reports from previous research, official statistics, mass media products, diaries, letters, government reports, web information and historical data and information. Primary data, on the other hand, is the data collected by the researchers themselves. For example, interview, observation, action research, case studies, life histories, questionnaires, ethnographic research and longitudinal studies.

3.2.1 Secondary Sources

Already documented information in the form of textbooks, journals, theses and dissertations were evaluated and used for the study as literature review. Relevant information from these sources was reviewed to ensure proper understanding of the subject of investigation. This allowed for comparison of ideas and findings of earlier researchers on the topic of investigation thereby enabling analysis of relevant variables in the present study. Thus, scholarly search engines were used to surf the internet for current information. Library reading was also conducted by the researcher.

3.2.2 Primary Sources (Social Survey)

The primary source of data for this research is the social survey. It is a method of collecting data using a questionnaire or interview guide where many respondents answer the same questions. A survey measures many variables, tests multiple hypotheses, and infers temporal order from questions about past behaviour experiences or characteristics (Neuman, 2000).

The choice of social survey was made because the researcher was interested in finding out from a cross section of wood workers their past behaviour with regards to occupational health and safety practices at work. This was to enable the researcher determine which characteristics predisposed people to non-compliance to safety rules at factories.

A close-ended questionnaire was used by the author as interview guide where respondents were unable to read. Thus, Two translations of the English language were done to facilitate understanding of the questionnaire whereby the researcher ticked the answer chosen by the respondents.

3.3 Sampling Procedure

3.3.1 Target Population

The target population for this study were wood workers at Naja David..... Limited. They consist of workers in charge of peeling/logging, boiling, drying and gluing the wood. They also include staff personnel such as accountants, administrators, records (manpower) and managers, both male and female who were currently at post at the time of doing the research.

3.3.2 Sampling Units

The units of analysis for the study comprises the individual employees of the organisation who take part in the four main stages of the wood processing – peeling/logging, boiling, drying and gluing. The current authorities of the company in charge of facilitating the work of these workers also form part of the units of analysis for the study.

3.3.3.3 Sampling Frame

The list of employees was obtained from the personnel office of the company. In all 500 employees were identified. They included 120 boilers (boiling), 100 loggers (peeling/logging), 180 gluers (gluing) and 100 dryers. Put together, a total worker population of 500 was identified.

3.3.4 Sample Size

In order for any research analysis to merit significance in statistical decision making Saunders, Lewis and Tornhill (2007) suggested that the sample size should be 10 percent or more of the population. Therefore, 30 percent of the 500 workers were sampled by the researcher which was 150 respondents. This again satisfies the condition needed for statistical test of significance in line with Openheim's (1990) argument that a sample size must be 60 or more in order to merit generalisation. In addition to the 150 respondents, one person from management was granted a structured interview in order to find out what health and safety policy was in place at the company.

3.3.5 Sample Selection

A probabilistic sampling approach was adopted by the researcher to select the 150 respondents. This was to prevent bias and enable every employee have equal chances of being selected or left out of the sample. Consequently, the systematic stratified random

sampling technique was used to sample the 150 respondents as follows. The 500 workers were put into their various work groups or strata consisting of boiling = 120, peeling/logging = 100, glue = 180 and drying = 100. Thirty percent of each stratum (work group) was chosen. Thus, 30 percent of 120 boilers is 36 respondents, 30 percent of 100 loggers is 30 respondents, 30 percent of 180 gluers is 54 respondents and 30 percent of 100 dryers is 30 respondents.

To select the individual respondents a sampling fraction of $\frac{1}{3}$ was used since the sample size (150) is approximately one third of the target population (500). A list of all workers in a particular stratum was compiled using the sampling frame. The first number (person) was chosen at random and every third number (person) was chosen after the preceding third number (person). This was rigorous and time consuming since the researcher had to implore every worker to keep his or her number in mind for the whole period of data collection. Finally, a total sample of 167 respondents was obtained. The aim of arriving at a slightly higher number (167) of respondents than the actual sample size 150) was to cater for non-responses which is normal in every social research.

With regards to the one respondent from management who was granted interview, a letter was sent together with the interview guide, based upon which the authorities of the company chose someone appropriate who was thus, interviewed. This procedure was viewed as both purposive and appropriate because not every managerial staff may be well versed in the policy on safety and health in the company. Therefore, it was fair to allow the company to choose a technical person appropriate for the interview to be successful.

3.4 Method of Data Collection

The main tool used for data gathering was self-administered questionnaire. All the participants to the research were literate. Therefore, they could read, comprehend and write in

the English language. Secondly, a questionnaire is one of the appropriate research tools for a social survey. The majority of the questions were close-ended while a few were open-ended. The close-ended questions were asked with the view to permitting vivid comparison of responses while the open-ended questions aimed at allowing participants to supply information which was not captured by the response categories. In other words, the open-ended questions were meant to supplement and exhaust the response categories in the questionnaire.

A semi-structured interview guide was used to collect data on the existing health and safety policy in the organisation. All questions asked in this guide were open-ended. This was to give the interviewee enough opportunity to fully express himself on issues pertaining to the question.

3.5 Pretesting of the Research Instrument

The questionnaire was pre-tested using 30 respondents from Sokoban Wood Village in Kumasi. The aim of pre-testing the research tool was to check for logic in the sequence of the questions asked. It was also meant to correct language difficulty and verify the average duration of time needed to answer each questionnaire.

A few questions were reworded to improve clarity of the language. A few also demanded additional response categories for them to be exhaustive. This was because respondents wrote answers which were not covered by the pre-tested answers in the draft questionnaire. Other background information of respondents such as religious affiliation, number of children, ethnicity, monthly income and rank were dropped after the pre-test because it was detected that answers to these questions were either falsified or not answered.

3.6 Administration of Questionnaire

A letter of introduction was first sent to the study organisations in April 2012, seeking for permission to conduct the study. The purpose of the study was explained in the letter to enable authorities of the organisations make an informed decision. The researcher also took the opportunity to interact and familiarise with the workers and the administrative structures and divisions of the facilities. Following suit to this earlier visit was the questionnaire administration in October, 2012. All questionnaires were hand delivered to the respondents.

The recollection of answered questionnaire was also done by hand. This gave opportunity to the researcher to do field editing of questionnaire thereby ensuring that all questions were correctly answered before collection.

A face-to-face interview session was held with the managerial staff purposively chosen for the interview. This took about 30 minutes since the interviewer had no recorder and had to write all answers to a question on a piece of paper before proceeding on to the next question on her list.

3.7 Response Rate

It is often difficult to obtain 100 percent response rate when one uses questionnaire to collect data. This is often due to nonresponses from some respondents. To avert the above problem, the researcher decided to distribute 167 questionnaires even though the sample size is 150. This was done in order to avoid a situation where less than 150 questionnaires would be retrieved. Out of the 167 questionnaires distributed, 156 of them were answered and returned indicating 93.4 percent response rate. After editing, three (3) questionnaires were dropped because respondents gave double answers. Another three (3) were dropped in order to get the actual sample size of 150 thus obtaining 100 percent actual response rate.

3.8 Problems Encountered

Some challenges were encountered by the researcher in the course of administering the questionnaire. Some respondents were hesitant to participate in the study because they could not perceive any immediate benefits to them. The researcher took time to explain to them that the study was an academic pursuit; although findings could be used for policy formulation and implementation to their benefit. Some respondents also complained of time constraints in answering the questionnaires. This was due to tight work schedules. To help solve this problem the questionnaires were given to such respondents to answer at their convenience either at break time or at home. The researcher then went back later to collect the completed questionnaires.

A few number of participants also feared that their participation would lead to victimisation from suspicious bosses or supervisors. They thought that if they gave unfavourable answers about the company, their supervisors could jeopardise their job security. This problem was, however, solved when the researcher assured them of anonymity and confidentiality of information gathered.

A few questionnaires were also misplaced by respondents. The researcher ensured that extra copies of the questionnaires were always kept handy. Cases of lost questionnaires were, therefore, resolved easily through replacement. These problems slowed down the data collection process. Nonetheless, it was successful with the help of some group supervisors who volunteered to gather and kept them down for the researcher.

3.9 Data Processing and Analysis

The answered questionnaires were edited to detect unanswered questions and also to eliminate errors such as double answers. The data were later cleaned and coded for entry into

the Statistical Package for Social Sciences (SPSS) for Windows software by the researcher. Computer editing was done after keying in of the data was completed. The data were analysed and presented statistically using frequency tables. The testing of hypotheses of the study was done using chi square test on the SPSS. The choice of chi square for hypothesis testing was made because the variables tested were predominantly categorical and as such the appropriate tool was chi square.

Information gathered from the interview was presented verbatim to satisfy the first research question raised. There was no need for tabular or pictorial representation except interpretations of answers provided by the respondent.

3.10 Ethical Considerations

Ethical issues which were ensured in this study included issues of informed consent, invasion of privacy, anonymity of respondents, voluntarism and plagiarism. The researcher sought the permission of all participants in the research before the conduct of the study (informed consent). Introductory letters were sent to the management of the selected institutions and their approval received before the research commenced.

The researcher made telephone calls and prior visits to management of the company in order to pre-arrange data gathering periods. This was to prevent unnecessary interruption in their work schedules thereby invading their privacy.

Neither names nor any identifiable information from respondents was taken as a way of ensuring the ethical principle anonymity in social research. This was to prevent possible victimisation of respondents in cases where certain responses may be viewed as injurious to management or colleagues.

While distributing the questionnaire, the researcher verbally informed all respondents who agreed to answer questionnaires that their participation was voluntary. They could, therefore,

opt out at any stage of the research process. They could also skip questions they did not know the answers otherwise any guess they made would be taken as a correct answer for analysis of the data. This was just to ensure that the researcher did not breach the ethical principle of voluntarism to participate in social research.

Pieces of information cited from earlier studies on occupational health and safety to support analysis of the study were duly acknowledged through both in-text referencing and a bibliography. This was meant to avoid academic dishonesty or plagiarism. Findings cited in the literature review of this study were also duly acknowledged in line with the academic property law.



CHAPTER FOUR

4. DATA ANALYSIS AND PRESENTATION

4.1 Introduction

The analysis and presentation of data gathered for the study are in five major sections. The first section contains the socio-demographic characteristics of respondents. The second section presents the availability and types of personal protective equipment at the study organisation. Thirdly, the attitude and behaviour of workers in terms of usage and non-usage of available personal protective equipment was also explored. Section four of the chapter presents the types of accidents that workers are frequently exposed to at the work place. Finally, the tests of hypotheses are presented in section five.

4.2 Socio-demographic data of respondents

The socio-demographic characteristics of respondents that were analysed in this study include the sex, age groups, level of education and number of years of experience of respondents. These variables were taken into consideration for the analysis because they have the capacity to determine choice of job among people especially that the study was carried out among workers in a wood factory.

4.2.1 Sex distribution of respondents

The majority (68.7%) of the respondents were males while 31.3 percent of them were females. Table 4.1 shows that the number of male workers is twice more than that of their female counterparts.

Table 4.1: Sex distribution of respondents

Sex	Frequency	Percent
Male	103	68.7
Female	47	31.3
Total	150	100.0

Source: Field survey, September 2011

4.2.2 Distribution of respondents according to age groups

The age group with the largest number of respondents was 34 – 41 years with 51.3 percent. This was followed by the 26 – 33 years age group with 30.7 percent. The others were 42 – 49 years age group with 9.3 percent of respondents which was closely followed by the 50 + year's age group with 8 percent. The age group with the least percent (0.7%) of respondents was the 18 – 25 years.

Table 4.2: Age groupings of respondents

Age group	Frequency	Percent
18 - 25 years	1	.7
26 - 33 years	46	30.7
34 - 41 years	77	51.3
42 - 49 years	14	9.3
50 + years	12	8.0
Total	150	100.0

Source: Field survey, September 2011

4.2.3 Level of education of respondents

Table 4.3: Educational qualification of respondents

Level of education	Frequency	Percent
Basic education	106	70.7
Secondary education	43	28.7
Tertiary education	1	.7
Total	150	100.0

Source: Field survey, September 2011

From table 4.3, it was indicated that an overwhelming majority of the respondents ended their education at basic school which is middle school, junior high school or primary school. Those who have had secondary level education were 28.7 percent while 0.7 percent of the respondents held tertiary level certificate on the job. By this distribution, the table (Table 4.3) reveals that about three quarters (3/4) of the respondents were basic school leavers.

4.2.4 Length of service on the job

The number of years a worker practices on the job is relevant in determining the amount of experience of the worker. All things being equal, the longer the term of service the higher the degree of experience a worker has on the job. Table 4.4 demonstrated that the majority (52%) of the participants had practiced on their jobs for 11 – 15 years. Twenty percent (20%) of them have had 1 – 5 years working experience and 9.3 percent have had the longest serving period of 21 + years. Participants who have worked for 6 – 10 years were 15.3 percent and only 3 percent of respondents have had 16 – 20 years working experience.

Table 4.4: Number of years of working experience

Number of years	Frequency	Percent
1 - 5 years	30	20.0
6 - 10 years	23	15.3
11 - 15 years	78	52.0
16 - 20 years	5	3.3
21 + years	14	9.3
Total	150	100.0

Source: *Field survey, September 2011*

4.3 Health and Safety Policy at Naja David Wood Industry Limited

According to the management of the company, health and safety policy is in operation but as to whether it is followed strictly or not depends on the worker and his or her supervisor. The core provisions of the policy included wearing of PPE at work and following standard procedures for operating machines. The company tried to operationalize this policy by providing PPE for workers which included safety boots, safety overalls, nose masks, hand gloves, etc. the company also did proper induction of new recruits and shift workers, followed guidelines from the Department of Factories Inspectorate, Ghana Fire Service and other regulators. Furthermore, reminder notices were accordingly published and supervisors punished workers who violated the policy code.

The company equally has a clinic with a qualified professional medical officer assisted by nurses and a stationed car to convey emergency cases to either the clinic or to hospital depending on the type and degree of emergency. The Department of Factories Inspectorate regularly advises the company on policy guidelines to ensure safety and anyone found to

have gone contrary to such guidelines was punished using the company's disciplinary procedures.

4.3 Types and availability of personal protective equipment (PPE)

In order to be able to enforce compliance with organisational health and safety measures in the company, employees have to be provided with health and safety equipment. The attitude of workers on usage of PPE and their behaviour with regards to the use PPE can also be determined by the availability such PPE. These were the reasons why the researcher thought it wise to verify the types of PPE available before proceeding on to measure workers' compliance with safety rules at the work place by looking at their attitude and behaviour towards PPE. It was also to confirm the availability and usage of PPE in the company as earlier indicated by management in the interview.

4.3.1 Provision of personal protective equipment (PPE)

When they were asked if they were provided with personal protective equipment for their job execution, 14.7 percent of the respondents answered in the negative. This meant that they were never provided with PPE and had to do their work fully exposed to accidents and other forms of hazards. Only 1.3 percent of respondents reported that they were always provided with PPE. The greater majority (84%) of respondents said that they were only provided with PPE at sometimes. This also indicated that sometimes they were not provided with PPE. See table 4.5.

Table 4.5: Availability of personal protective equipment in the company

PPE Availability	Frequency	Percent
Never	22	14.7
Sometimes	126	84.0
Always	2	1.3
Total	150	100.0

Source: Field survey, September 2011

4.3.2 Types of personal protective equipment available in the company

From the response from majority of the respondents that they were sometimes provided with personal protective equipment, the researcher asked to know the types of PPE which were sometimes provided. Table 4.6 displays the types of PPE available and the number of workers who have access to them.

Table 4.6: Types of PPE available to workers

Types of PPE available	Availability		Total
	Yes	No	
Nose masks	54	96	150
Helmets	0	150	150
Gloves	120	30	150
Safety boots	0	150	150
Goggles	0	150	150
Safety overall	0	150	0

Source: Field survey, September 2011

Table 4.6 indicates that some PPE were never provided by the company at all. These included safety overall, goggles, safety boots and helmets. Fifty four (54) respondents out 150 representing 36 percent were provided with nose masks by the company. In addition to these, 120 out of the 150 respondents representing 80 percent were provided with hand gloves by the company. These statistics indicates the level of accidents or hazards in the company could be very high since only two out of the six PPE generally found in factories were available. Worst still, not every worker was even provided with such PPE.

4.4 Attitude and behaviour of respondents towards occupational health and safety

To find out the attitude and behaviour of respondents towards occupational health and safety they were asked if they think PPE could prevent them from accidents. They were also asked to indicate whether they used the available PPE at work. Finally, the opinions of respondents were sampled on the dangers of not using PPE at work. The responses to the above issues raised were analysed and presented in the tables which follow.

4.4.1 Prevention of accidents

Table 4.8: PPE and prevention of accidents at work

Opinion	Frequency	Percent
Strongly disagree	1	.7
Agree	2	1.3
Strongly agree	147	98.0
Total	150	100.0

Source: Field survey, September 2011

From table 4.8, it could be seen that 98 percent of the respondents strongly agreed to the fact that the use of PPE prevents accidents at work. This is a sign of positive attitude towards PPE and occupational health and safety. In addition to the 98 percent was another 1.3 percent of the respondents who agreed that the use of PPE at work can prevent or reduce the risk of getting accidents. In all, therefore, 99.3 percent of the respondents saw PPE as preventive measure to accidents at work. Only 0.7 percent of the respondents strongly disagreed that PPE can prevent accidents.

4.4.2 PPE usage at work among respondents

Table 4.8: Use of PPE at work

Usage	Frequency	Percent
Not applicable	22	14.7
Never	20	13.3
Sometimes	108	72.0
Total	150	100.0

Source: Field survey, September 2011

When they were asked whether they used the few PPE available to them, the majority of respondents said they sometimes used them. In sharp contrast to this were 13.3 percent of the respondents who said that they never used PPE while the question was not applicable to 14.7 percent of the respondents. It was not applicable to them because they were never provided with PPE and for that matter they could say whether they used PPE or not.

4.5 Consequences of refusal to use PPE

With the exception of 0.7 percent of the respondents, the rest agreed that failure to use PPE was injurious to one's health and safety. They included 2.7 percent of respondents who agreed with the statement and 96.6 percent who strongly agreed that failure to use PPE could lead to accidents at work (Table 4.9). This suggested that workers would readily use PPE if they were available. This also confirms the earlier information presented in table 4.8 that PPE can prevent accidents.

Table 4.9: Opinions of respondents on failure to use PPE

Opinions	Frequency	Percent
Not applicable	1	.7
Agree	4	2.7
Strongly agree	145	96.6
Total	150	100.0

Source: Field survey, September 2011

4.6 Level of employee involvement in accidents

The study sought to find out among other things the level of occurrence of accidents at work among employees. This was to confirm and answers they would have given about their role in preventing or causing accidents. The majority (54%) of respondents admitted that they often experience accidents at work. Another 34 percent of respondents testified that they experience accidents very often at work. Put together, one can say that the rate of accidents occurring at the workplace was very high (88%). A few respondents (3.3%) rarely suffered accidents whereas 8.7 percent never got accidents while at work. The above information is presented in table 4.6.

The high rate of accidents occurring at the workplace is attributable to the fact that PPE were not sufficiently provided by the organisation for its employees. This is because the analyses show that only 36 percent of respondents were provided with nose masks and 80 percent with hand gloves (Table 4.6). Other protective equipment such as goggles, safety boots, safety overall coats were non-existent in the organisation.

Table 4.10: Frequency of accidents at work

Frequency	Frequency	Percent
Never	13	8.7
Rarely	5	3.3
Often	81	54.0
Very often	51	34.0
Total	150	100.0

Source: Field survey, September 2011

4.6.1 Place(s) of accidents at work

Table 4.11: Place of occurrence of accidents

Place	Frequency	Percent
Not applicable	13	8.7
At the production area	77	51.3
At the yard	60	40.0
Total	150	100.0

Source: Field survey, September 2011

With regards to where the numerous accidents experienced by employees occurred, table 4.11 shows that majority (51.3%) of the accident cases took place at the production area. That is where the wood is treated and sawn into desirable sizes for parking and storage. Forty percent (40%) of the accidents also occurred at the yard where the tracks are engaged to load outgoing stock. Some respondents, however, never experienced any accidents at work. These include 8.3 percent of the respondents.

4.6.2 Nature of accidents

Table 4.12: Nature of accidents sustained at work

Nature of accident	Frequency	Percent
Not applicable	13	8.7
Fracture	29	19.3
Bruises	51	34.0
Spain/Strain	5	3.3
Laceration/Burns	51	34.0
Others (eyes)	1	.7
Total	150	100.0

Source: Field survey, September 2011

From table 4.12, it was clear that the two most common accidents at the workplace among respondents were bruises and lacerations or burns of which 34 percent of employees sustained each. Bruises and lacerations were the commonest cases of accidents at the workplace because they lacked safety boots to protect their feet. Apart from these two common accidents, 19.3 percent of respondents reported having suffered from fractures and just 0.7 percent of respondents suffered eye defects resulting from accident. Cases of eye

accident were the least at the workplace. This was a bit surprising because none of the respondents were provided with goggles by the company and as such it was expected that eye accidents would have been among the commonest accidents.

From table 4.8, it was realized that 72 percent of respondents used PPE only at sometimes but not always while 13.3 percent never used PPE. Furthermore, 14.7 percent of respondents did not use PPE because they were never provided with some. Following the above statistics, the researcher wanted to know from respondents what could be done to ensure regular usage of the PPE. The responses of participants to the above issue were presented in table 4.13.

4.6.3 Ensuring PPE usage among employees

Table 4.13: Ensuring PPE usage at work

Suggestion made	Frequency	Percent
By enforcing rules and regulations	3	2.0
By provision of PPEs	147	98.0
Total	150	100.0

Source: Field survey, September 2011

From table 4.13, an overwhelming majority (98%) of the respondents suggested usage of PPE would be ensured if PPE were readily provided by the company for employees. This would create the need for employees to use PPE since they would be provided by the company. Only 2 percent of respondents thought that PPE usage would be improved by enforcing rules and regulations at the work place. In other words, 2 percent of respondents blamed failure to use PPE at work on lack of enforcement of the company's health and safety policies.

4.7 Hypotheses Testing

In order to find the relationship between worker background information and compliance with occupational health and policy practices at the company (Naja David Group of Companies), chi square tests were used. Eight hypotheses were tested involving four background characteristics (sex, age, education and length of service) of workers and two characteristics (PPE Usage and involvement in accidents) of occupational health and safety compliance.

Hypothesis I

H1: There is a significant relationship between sex and PPE usage.

H0: There is no significant relationship between sex and PPE usage.

Table 4.14 Chi Square Test between Sex and PPE Usage

Statistics	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.495 ^a	2	.473
Likelihood Ratio	2.380	2	.304
Linear-by-Linear Association	.221	1	.638
N of Valid Cases	150		

Source: Field survey, September 2011

$\alpha=.05$, 2-tailed test

Table 4.14 demonstrates a chi-square test between the sex of respondents and PPE usage at 95 percent level of confidence. The value of the test statistic or the p-value is 0.473 which is greater than the significance value (0.05). Therefore, the sample does not provide enough evidence to reject the null hypothesis which stated that there is no relationship between the sex of respondents and PPE usage among wood workers in the Naja David Group of Companies. Hence, we accept the null hypothesis and conclude that we are 95 percent

confident that there is no significant relationship between sex and PPE usage. In other words, whether a worker would use PPE or not has nothing to do with the worker's sex, male or female.

Hypothesis II

H1: There is a significant relationship between age and PPE usage.

H2: There is no significant relationship between age and PPE usage.

Table 4.15 Chi Square Test between Age and PPE Usage

Statistics	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	29.036a	8	.000
Likelihood Ratio	23.774	8	.003
Linear-by-Linear Association	1.600	1	.206

$\alpha=.05$, 2-tailed test

The p-value in Table 4.15 (.000) is by far less than the significance value (.05). Therefore, there is enough evidence to reject the null hypothesis which states that there is no relationship between age and PPE usage. In other words, the research hypothesis which states that there is a significant relationship between age and PPE usage is valid. Consequently, we conclude that we are 95 percent confident that there is a significant relationship between age and PPE usage whereby older workers may use PPE more frequently than younger workers.

Hypothesis III

H1: Level of education and PPE usage among wood workers are significantly related.

H2: there is no significant relationship between level of education and PPE usage.

Table 4.16 Chi-Square Test between Level of Education and PPE Usage

Statistics	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.696 ^a	4	.002
Likelihood Ratio	20.555	4	.000
Linear-by-Linear Association	5.442	1	.020
N of Valid Cases	150		

$\alpha=.05$, 2-tailed test

From Table 4.16, it is shown that the p-value (.002) is smaller than the alpha (.05) and as such the null hypothesis is rejected while the research hypothesis is accepted. We, therefore, conclude that we are 95 percent confident that there is a significant relationship between PPE usage among wood workers in the study organisation. In other words, one's level of usage of PPE is dependent on one's level of education.

Hypothesis IV

H1: There is a significant relationship between length of service and PPE usage

H0: There is no significant relationship between length of service and PPE usage.

Table 4.17 Chi-Square Test Length of Service and PPE Usage

Statistics	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	56.425 ^a	8	.000
Likelihood Ratio	47.085	8	.000
Linear-by-Linear Association	7.718	1	.005
N of Valid Cases	150		

$\alpha=.05$, 2-tailed test

To find out if there was a significant relationship between length of service and PPE usage, a chi-square test (Table 4.17) was conducted in which the p-value (.000) was found to be far less than the significance level (.05). Consequently, the null hypothesis was rejected since there was not enough evidence to support its validity. The research hypothesis was, thus, accepted at 95 percent confidence.

Hypothesis V

H1: There is a significant relationship between sex and involvement in accident

H0: There is no significant relationship between sex and involvement in accident

Table 4.18 Chi-Square Test between Sex and Involvement in Accidents

Statistics	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	108.575 ^a	3	.000
Likelihood Ratio	119.921	3	.000
Linear-by-Linear Association	40.035	1	.000
N of Valid Cases	150		

$\alpha=.05$, 2-tailed test

Table 4.18 tests the possibility of a relationship between sex and involvement in accidents. The chi-square test indicates that there is a significant relationship between sex and involvement in accident at 95 percent level of confidence. The value of the test statistic or the p-value is 0.000 which is less than the significance value of 0.05 (the margin of error). Therefore, we accept the research hypothesis which states that sex and involvement in accident are related while rejecting the null hypothesis which argues that there is no significant relationship between sex and involvement in accident.

Hypothesis VI

H1: There is a significant relationship between age and involvement in accident

H0: there is no significant relationship between age and involvement in accident.

Table 4.19 Chi-Square Test between Age and Involvement in Accidents

Statistics	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	116.408 ^a	12	.000
Likelihood Ratio	93.858	12	.000
Linear-by-Linear Association	19.899	1	.000
N of Valid Cases	150		

$\alpha=.05$, 2-tailed test

Table 4.19 is a chi-square test between age and involvement in accident at 95 percent level of confidence. The value of the test statistic or the p-value is 0.000 which is less than the significance value (0.05) or the margin of error. Therefore, the null hypothesis has been rejected in favour of the research hypothesis which states that age and involvement in accident are related. Consequently, we conclude that we are 95 percent confident that there is a significant relationship between the age of a worker and the chances of getting involved in accidents. In other words, we are 95 percent confident that older workers experience accidents less than younger workers. In 5 percent of the cases, however, this conclusion may not be credible.

Hypothesis VII

H1: Level of education and involvement in accident are significantly related.

H0: Level of education and involvement in accident are independent.

4.20 Chi-Square Test between Level of Education and Involvement Accidents

Statistics	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	90.708 ^a	6	.000
Likelihood Ratio	89.650	6	.000
Linear-by-Linear Association	15.266	1	.000
N of Valid Cases	150		

$\alpha=.05$, 2-tailed test

Table 4.20 presents a chi-square test between level of education and involvement in accident at 95 percent level of confidence. The value of the test statistic or the p-value is 0.000 which is less than the significance value (0.05). Therefore, the null hypothesis which stated that there is no relationship between the level of education and the rate of getting accident among wood workers in the Naja David Group of Companies has been rejected. Hence, we conclude that we are 95 percent confident that there is a significant relationship between level of education and involvement in accidents. In other words, the more one is educated the less likely one gets involved in accidents. However, the above conclusion is 5 percent of the time wrong.

Hypothesis VIII

H1: Length of service is a function of involvement in accident

H0: Length of service and involvement in accident are independent.

4.21 Chi-Square Test and Length of Service and Involvement in Accident

Statistics	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	46.420 ^a	12	.000
Likelihood Ratio	48.581	12	.000
Linear-by-Linear Association	.452	1	.501
N of Valid Cases	150		

$\alpha=.05$, 2-tailed test

Table 4.21 demonstrates a chi-square test between length of service and involvement in accident at 95 percent level of confidence. The value of the test statistic or the p-value is 0.000 which is less than the significance value (0.05). Therefore, the sample does not provide enough evidence to accept the null hypothesis which stated that there is no relationship between the number of years of work and the rate of getting accident among wood workers in the Naja David Group of Companies. Hence, we reject the null hypothesis and conclude that we are 95 percent confident that there is a significant relationship between length of service and involvement in accidents. In other words, accidents reduce as workers stay longer on the job and gather enough experience. In saying so, however, one is 5 percent of the time fallible.

CHAPTER FIVE

DISCUSSION OF FINDINGS

On socio-demographic characteristics of respondents, four areas were examined by the study. These included their sex, age, level of education and number of years of work. The majority of respondents were males. In fact, the number of males was twice greater than the number of females among the respondents. This was because work in the wood factory demands a lot of physical strength for its execution. And this explains why females are very few there since they do not have equal strength as their male counterparts.

The age group with the largest number of respondents was 34 – 41 years followed by the 26 – 33 years age group. People in these age groups are still young and strong. As such they have the energy to do hard work such as cutting, lifting and pushing. In effect, they constitute the economically active age group and as such they are desirous in working to meet life challenges and considering the fact that over 70 percent of them were basic school leavers, they do not have employable skills to find themselves jobs in the formal sector such as offices and white collar jobs. The only possible place they can therefore engage themselves to meet their economic needs is the blue collar jobs and manual jobs such as exist in the wood processing factories.

The majority of respondents had worked in the company for 11 to 15 years (52%). The number of workers in the 16 to 20 years of work, however, reduced drastically to 3 percent and picked up a little again to 9 percent in the 21 to 25 years of experience group. These figures show that few people work in the factory for longer period of time. This may be because of the tedium involved in the work which weakens people in the course of time thus, causing many of them to resign or leave for other jobs.

The provision of personal protective equipment (PPE) for employees to protect themselves from danger wasn't encouraging. This is because the majority of them testified that they were provided with PPE only at sometimes. This means that at other times they worked without any protective equipment. About 14 percent of respondents even reported that they were never provided with PPE and are constantly exposed to hazards such as sharp objects and heat, noise and odour. Even among those who were sometimes provided with personal protective equipment, these equipment were either nose masks (36%) or hand gloves (80%).

Other equally necessary equipment that should be worn by factory workers such as safety boots, safety overalls, helmets and goggles were non-existent. Respondents indicated that the company did not provide them with these equipment. Therefore, it meant that they would have to provide such equipment themselves. This was enough evidence to show that health and safety issues were not a priority in the company.

The respondents, however, unanimously agreed that the wearing of PPE could help prevent unnecessary accidents at the site. This indicates that the workers know the importance of the putting on PPE. The problem was that such equipment were not readily available in the company.

When they were asked whether they used the few PPE available, 72 percent of the respondents said they only used them sometimes. 13.3 percent of them never used PPE and the question was not applicable to 14.7 percent of the respondents because they were never provided with PPE. These statistics indicate that the workers only used PPE when they liked and were not probably supervised with regards to PPE usage. Supervisors might not have been insisting on PPE usage because the organisation did not make the equipment available.

The majority (54%) of respondents admitted that they often experienced accidents at work. Another 34 percent of respondents testified that they experience accidents very often at work.

Put together, one can say that the rate of accidents occurring at the workplace was very high (88%).

The high rate of accidents occurring at the workplace is attributable to the fact that PPE were not sufficiently provided by the organisation for its employees and usage of PPE among workers was equally low. Therefore, it wasn't surprising to realise that accidents occur frequently among employees. This was because they were constantly exposed. Occupational health and safety in the company, once again, was proved to be less catered for. Most of the accidents were found to have occurred in the yard (40%) and at the production area (51%).

The two most common accidents at the workplace among respondents were bruises and lacerations or burns. 34 percent of respondents sustained each of these accidents. Apart from these two common accidents, 19.3 percent of respondents reported having suffered from fractures and just 0.7 percent of respondents suffered eye defects resulting from accident. These cases of accidents at the workplace are due to the fact that they lacked PPE to protect their feet, hands, bodies and eyes. Consequently, employees suffered little cuts and bruises which could have all been prevented.

According to an overwhelming majority (98%) of respondents the use of PPE among them would have been improved if the company had provided them. two (2%) of respondents also thought that PPE usage among them would improve with enforcement of the rules and regulations guiding operations and work at the factory.

The discussion so far points to the fact that usage of PPE among workers in the Naja David Group of Companies was low because PPE were not readily available to the majority of employees. The few which were available were not consistently used and as such various types and degrees of accidents occurred frequently among workers. The researcher, therefore, wanted to know which category of workers, in terms of their background characteristics such

as age, sex, education and experience, were likely to obey or disobey health and safety regulations. Two criteria were used to indicate health and safety regulation – PPE usage and involvement in accident. Consequently, eight (8) hypotheses were tested using chi square test to determine compliance to occupational health and safety (PPE usage and involvement in accidents) and worker background characteristics (sex, age, education and experience). The results of these tests of hypotheses are worth discussing.

The first category of hypotheses tested the relationship between PPE usage and the background characteristics of respondents – sex, age, education and experience (length of service). Hypothesis I tested the relationship between sex and PPE usage at alpha .05. the p-value (.473) of the test was very significant indicating that there was no relationship between the sex of a worker and his or her inclination to use or not to use PPE. Therefore, one cannot conclude that male workers or female workers use PPE more or less than the other.

Consequently, the null hypothesis (H_0) was accepted while the research hypothesis rejected. Hypotheses II, III and IV indicated that there were significant relationships between age, level of education and length of service respectively. This is because the p-values of these hypotheses were insignificant compared to the alpha (.05) and as such the null hypotheses were rejected in favour of the alternate hypotheses. In other words the chi square tests proved that there was significant relationship between PPE usage and age, level of education and number of years of working experience. To that extent one could say that PPE usage among respondents improved with age, education and experience.

Hence, older workers used PPE more than younger workers, the higher one's level of education the higher one's level of usage of PPE and the more experienced workers also used PPE more than less experienced ones in terms of length of service.

The second category of hypotheses tested the relationship between the four background characteristics – sex, age, education and experience and involvement in accident. In other words, does involvement in accident depend on sex, age, level of education and length of work experience? The respective p-values were .000 and which were all less than the significant value (alpha) of .05. These tests, therefore, indicated that there was significant relationship between sex, age, education and experience.

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CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

The purpose of this chapter is to enable readers know in brief what the general problem of the study is, the results of the study are and the method that was employed by the researcher to arrive at those results. It is also to enable readers to know what recommendations were made, first of all, for policy formulation and implementation and secondly for future research. Thus, this chapter presents the summary of the study, the recommendations and the conclusion of the study.

6.2 Summary of the Study

The problem that the study sought to investigate is the relationship between worker characteristics and compliance to occupational health and safety in the Naja David Group of Companies. This was necessitated by the fact that earlier research studies point to the existence of numerous occupational hazards faced by wood workers in the country. The study was therefore, intended to find out whether health and safety policies exist in the wood industry. If it exists whether workers in the wood industry adhere to such health and safety policies and what category of workers adhere to or do not adhere to the policy thus, leading to these numerous reports by earlier studies.

A literature review was carried out using both foreign and local information. This consisted of literature on occupational health and safety in the wood industry was conducted. The history of the concept of occupational health and safety was also traced in brief. Efforts made so far in Ghana as way of ensuring occupational health and safety were also reviewed. It was realised that there is no comprehensive policy on occupational health and safety in the

country. However, companies have been encouraged and empowered to come out with their policies on occupational health and safety in the country.

An exploratory research was conducted on a randomly selected sample of 150 wood workers of the Naja David Group of Companies using a survey questionnaire. Two separate questionnaires were prepared – one for managerial staff which tried to find out the existence of health and safety policy and one for workers which focused on their background characteristics and their compliance to health and safety policies if any.

The data gathered from respondents to the questionnaires were analysed using Statistical Package for Social Scientists (SPSS). The analyses were presented using frequency tables and the hypotheses tested using chi square.

Four background characteristics of respondents were studied. These included their sex, age, level of education and number of years of work experience. Compliance to occupational health and safety was operationalized using three parameters – the availability of personal protective equipment, usage of such equipment and involvement in accidents at the work place. Chi square tests were conducted using the SPSS to test whether there was significant relationship between the four background characteristics of respondents and compliance to occupational health and safety.

The analyses revealed that there is no significant relationship between sex and PPE usage. However, there was significant relationship between age, level of education and number of years of work experience and PPE usage among the respondents. Furthermore, the analysis revealed that there was significant relationship between the four background characteristics (sex, age, level of education and number of years of work experience) and involvement in accidents at work.

6.3 Recommendations

Based on the results of the study the following recommendations were made to help attenuate the problem investigated:

First of all, there was no comprehensive policy document on health and safety at the Naja David Group of Companies. It is therefore, recommended that a policy document be printed in black and white and circulated among workers for their information and education. This should be followed by a discussion in groups of the document to ensure that employees understand it. This would help prevent accidents which are caused due to ignorance.

Secondly, personal protective equipment were not readily available in the company for use by employees. These included hand gloves, helmets, nose masks, safety overalls, safety boots and goggles. Only few workers were provided with hand gloves and nose masks. The rest of the equipment mentioned were non-existent. It is therefore, recommended that safety equipment be provided by the company for employees. This will show to employees how committed the company is towards health and safety in the company.

Usage of the few health and safety equipment provided by the company was not encouraging. This is the reason for numerous accidents among workers as indicated by the findings. Strict measures should be put in place whereby no employee should be allowed to enter the production area or yard without his or her PPE.

Work group supervisors should be empowered to discipline immediately their subordinates whose behaviour is contrary to codes on the operations of machines or regulations guiding behaviour at work. This is because such supervisors are constantly in touch with workers and therefore, would be better placed to enforced policies than upper managerial staff.

Training and refresher courses should also be organised using simulations or scenarios at the work place for both new recruits and regular workers respectively. The will keep them abreast of the dangers of their work and how to prevent them.

There is currently a clinic at the factory which provides first aid to injured workers and treats other minor cases of health and safety. This is step in the right direction. Employees who visit the clinic for treatment should have their cases investigated. If they are found to be negligent, they should be made to bear the cost of treatment at the clinic. This would ensure compliance to safety rules and regulations.

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6.4 Recommendation for Future Research

This work covers only a minute aspect of occupational health and safety in the wood industry. Issues of infections and diseases were not covered except the occurrence of accidents. It is therefore, recommended that future researchers expand the scope of the study to include all aspects of health and safety in the wood industry and a cross section of wood processing factories be sampled.

6.5 Conclusion

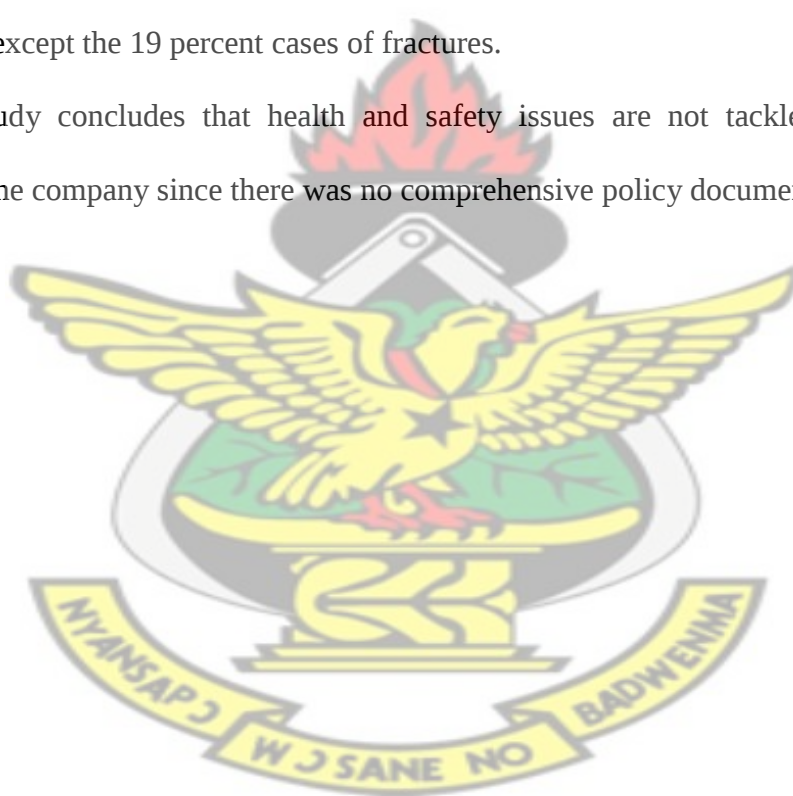
The study concludes that compliance to occupational health and safety differs across employees in the wood processing industry based on a number of factors. These include age, education and experience. One's inclination to using PPE at work depends on one's age, level of education and number of years of work experience. However, there is no relationship between sex and PPE usage.

The study again concludes that there is significant relationship between one's sex, age, education and experience and one's involvement in accidents. Therefore, the rate at which workers get involved in accidents at work is dependent, to a significant extent, on their sex, age, level of education and number of years of work experience.

Furthermore, one can conclude, based on the findings of the study, that compliance to occupational health and safety measures is dependent on the availability of adequate health and safety equipment coupled with closed supervision. In the study organisation it was found that safety equipment were not readily available and as such employees did not even border using the few available ones consistently for their safety.

There is high rate of accidents among workers at the Naja David Group of Companies because they do not use PPE and as such they are constantly exposed. However, one could see from the analysis that these accidents were minor cases involving bruises, burns and strains/sprains except the 19 percent cases of fractures.

Finally, the study concludes that health and safety issues are not tackled with enough seriousness at the company since there was no comprehensive policy document on it.



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APPENDIX A

INTERVIEW GUIDE

MASTER'S THESIS INTERVIEW QUESTIONS WORKER CHARACTERISTICS AND COMPLIANCE TO OCCUPATIONAL HEALTH AND SAFETY. A STUDY OF NAJA DAVID WOOD INDUSTRY LIMITED IN KUMASI METROPOLIS

By

ELIZABETH ADWOA KWANKYE

**DEPARTMENT OF SOCIOLOGY AND SOCIAL WORK
FACULTY OF SOCIAL SCIENCES, KNUST**

SUPERVISORS:

KWEKU YEBOAH (PhD)

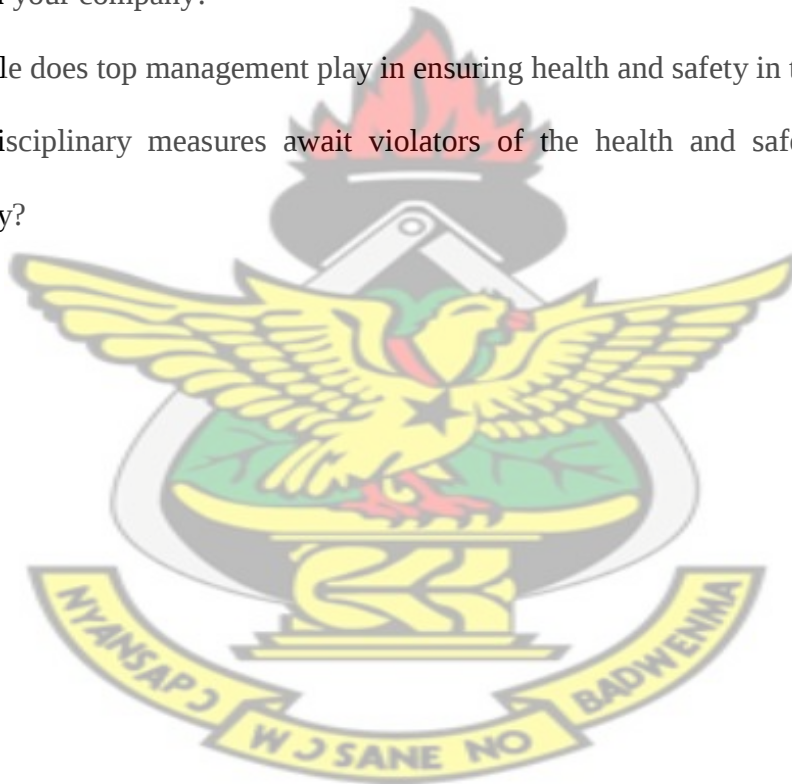
KOFI OSEI AKUOKO (PhD)

QUESTIONNAIRE FOR MANAGEMENT

My name is Elizabeth Adwoa Kwankye, a postgraduate student of the Department of Sociology and Social Work, KNUST. I am conducting this research as part of preparation for Master's Degree Programme. Your organisation has been chosen as for a survey. The study is for learning purposes and as such I would appreciate your voluntary cooperation to complete the questionnaire or allow me to interview you. Your responses will not be disclosed to any person.

Thank you.

1. Sex :
2. Age:
3. Literacy:
4. Is there a policy on health and safety in this company?
5. What are the core provisions of the policy if any?
6. How do ensure health and safety for your workers?
7. How do you handle accident cases in your company?
8. What role does the Department of Factory Inspection play in promoting health and safety in your company?
9. What role does top management play in ensuring health and safety in the company?
10. What disciplinary measures await violators of the health and safety code in the company?



APPENDIX B

QUESTIONNAIRE FOR EMPLOYEES

MASTER'S THESIS QUESTIONNAIRE

WORKER CHARACTERISTICS AND COMPLIANCE TO OCCUPATIONAL HEALTH AND SAFETY. A STUDY OF NAJA DAVID WOOD INDUSTRY LIMITED IN KUMASI METROPOLIS

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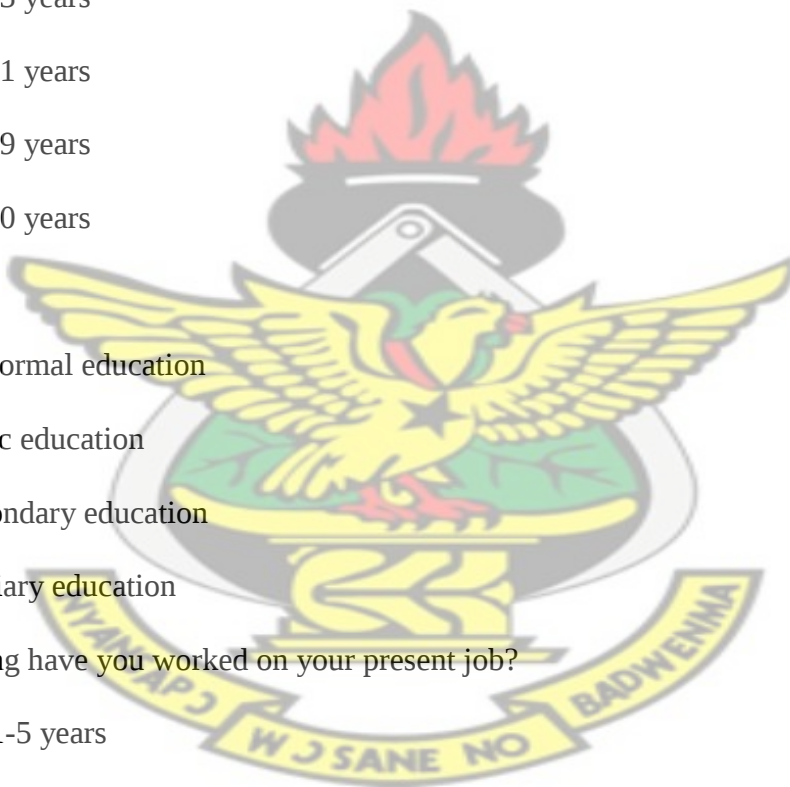
SECTION ONE

SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENT

INSTRUCTION: Circle the correct answer

1. Sex
 - a. Male
 - b. Female
2. Age group
 - a. 18-25 years
 - b. 26-33 years
 - c. 34-41 years
 - d. 42-49 years
 - e. 50-60 years
3. Literacy
 - a. No formal education
 - b. Basic education
 - c. Secondary education
 - d. Tertiary education
4. How long have you worked on your present job?
 - a. 1-5 years
 - b. 6-10 years
 - c. 11-15 years
 - d. 16-20 years
 - e. 21 + years

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AVAILABILITY OF PPE

5. Are you provided with personal protective equipment (PPE) on the job?

- a. Never
- b. Sometimes
- c. Very often
- d. Always

6. Which of these PPE are you provided with if any?

- a. Nose masks Yes No
- b. Helmets Yes No
- c. Gloves Yes No
- d. Safety boot Yes No
- e. Goggles Yes No
- f. Safety overall Yes No
- g. Others, specify:

.....

ATTITUDE AND BEHAVIOUR OF WORKERS TOWARDS PPE

7. Do you use the PPE during work?

- a. Never
- b. Sometimes
- c. Very often
- d. Always

8. Do you agree that refusal to use PPE poses serious danger to one's health and safety?

- a. Strongly disagree
- b. Disagree

- c. Not sure
- d. Agree
- e. Strongly agree

TYPES OF ACCIDENT AT WORK

9. Have you ever been involved in an accident on your job?

- a. Never
- b. Rarely
- c. Often
- d. Sometimes
- e. Very often
- f. Always

10. Where did the accident occur?

- a. At the production area
- b. At the yard
- c. In the surrounding

11. What was the nature of the injury/accident you sustained if any?

- a. Fracture
- b. Bruises
- c. Sprain/strain
- d. Lacerations/burns
- e. Others, specify:

12. Do you think the use of PPE can prevent injuries/accidents at work?

- a. Strongly disagree
- b. Disagree

- c. Not sure
- d. Agree
- e. Strongly agree

13. What can be done to ensure that workers use PPE at work?

- a. By creating awareness
- b. By enforcing rules and regulations
- c. Nothing can be done

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