A STUDY OF THE DISTRIBUTION AND DETERMINANTS OF INDUSTRIAL ACCIDENTS AMONG WORKERS IN EL NASR COMPANY FOR T.V. & ELECTRONICS IN EGYPT

THESIS

Submitted in partial fulfilment of

Master Degree

In Industrial Medicine

BY

MABEMBEZI SEWAVA JULIA

(MBChB, DPH)

Supervised

by

Prof. Dr. Aly Massoud Ass. Prof. Dr. Rifky Fares

Department

of

Public Health & Industrial Medicine

Faculty of Medicine

Ain-Shams University

1980

ACKNOWLEDGEMENT

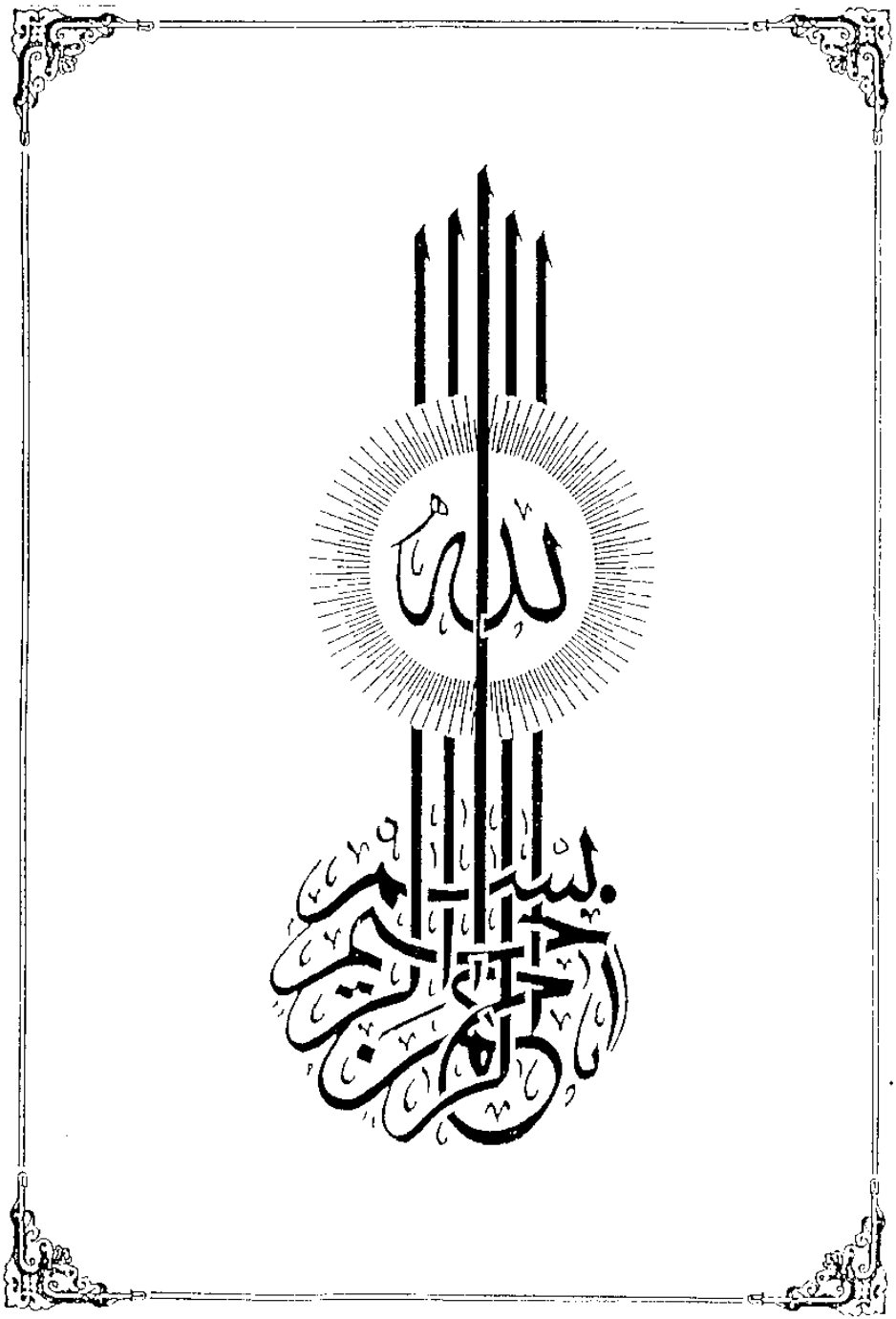
I wish to express my gratitude to Prof. (Dr) Aly A.E. Massoud, the Head of the Department of Public Health, Industrial & Occupational Health, Ain-Shams University, for his assistance.

I am greatly indebted to the Assistant Prof. (Dr) Rifky Fares of the same department whose constant advice and help at every step of this study have been indepansable.

My thanks go to Prof. (Dr) Ahmed A. Khalifa and Dr. S. Wassif of the same department for their help in the preparatory stages of this study.

I thank Dr. Farid Emara, the Director of the Medical Services and Safety Unit at El Nasr Company for Television & Electronics for enabling me access to the records and for his valuable information on the functions of his department.

Finally, I wish to thank all those who have assisted me in this study.



TO MY GRAND
MOTHER

TABLE OF CONTENTS

CHAPTER I

INTRODUCTION

&

AIM OF STUDY

INTRODUCTION

Health hazards associated with work have been recognised since ancient times though their control has been slow. In ancient times, mining was already known as hazardous and was done by slaves, prisoners or criminals. The need to improve hazardous conditions was not then desireable for after all, there was ample reserve of manpower from slaves etc, to replace the injured ones or such environments were a punishment to prisoners and criminals.
The earliest attempt to control work hazards started during the Roman period in the 2nd century A.D. During the middle ages & renaissance, there was need for skilled labour and further attempts to control work hazards were made for a skilled worker could not be easily replaced when injured as was the case in ancient times. In the seventeenth century Bernardio Ramazzini published his work "De Morbis Artificum Diatriba"(Diseases of work-men) which contributed further to the realisation of health hazards due to occupations. However, during the Industrial Revolution in the eighteenth century, more serious health effects were caused by work when children and women even when pregnant were employed and exposed to hazardous conditions for even excessively long hours in an attempt to increase production (Johnstone & Miller, I960).

Liberals, humanists, medical personnel had to step in to influence government to make laws safeguarding workers. In United Kingdom the first Act - the Health and Morals of Apprentices Act in I802 limited work of children in cotton factories to I2 hours a day. In I897, the workmen's compensation Act protected the workers' inability to earn due to incapacity caused by work (Waldron, I979).

On the International scale, co-ordinated international work on this aspect did not start until after the first World War. In I9I9, the International Labour Organisation (I.L.O.) was formed with one of its aims being the promotion and maintenance of the highest degree of physical, mental and social well being of workers in all occupations and the prevention of departures from health among all workers caused by their employment from risks adverse to their health.

The International Labour Organisation has attempted to standardise statistics on employment injuries to have comparability within and on the international scale (I.L.O. statistics of industrial injuries, I970). Up to now, countries are making all attempts to decrease work hazards.

Studies show that industrialisation increases the

risks to all sections of the population (Schilling R.S.F. I973). In British factories in I96I, 368 workers died & I6I,555 were injured seriously enough to be absent from work for more than 3 days, 30% of all accidents in British Industry are sustained at work and account for ½ a million annual casualties at a cost in manpower wastage of approximately £ 70 million (Featherstone, I964). Accident frequencies are said to be higher in comparable areas of industrialised countries (El Batawi, I964). This could mean loss of manpower and money which are very much needed in developing countries. In this study in Egypt, El Batawi (I964) found a higher prevalence rate of occupational diseases and injuries resulting from industrial accidents than that of all endemic diseases and there was a related scarcity of occupational health services thus in cotton and ginning operations about 6% of the workers had pre-placement medical examination, 4% had both pre-placement and periodic examinations while 92% had neither pre-placement nor periodic medical examinations. El Dieb (I97I) as quoted by Bishara (I979) in her study found that injury frequency and severity rates were affected by the safety performance and the availability of medical services. Bishara (I979) in her study feels that an industrial medical department and a safety unit are some of the pre-requesits necessary for lowering the suffering and loss caused

by industrial accidents. It thus appears that one of the factors responsible for higher accident rates in industrialising areas of developing countries is due to lack or insufficient occupational health services.

AIM OF THIS STUDY

This study aims at finding out the industrial accident frequency and severity rates, factors associated with the occurrence of industrial accidents and the consequencies of these accidents at El Nasr Company for T.V. & Electronics.

This company was chosen because of the presence of an occupational health and safety unit~~s~~ ~~for~~ administrative reasons,

CHAPTER 2

REVIEW of LITERATURE

REVIEW OF LITERATURE

A study of the causes of industrial accidents is difficult because the causes of even a single accident can be many. To simplify such a study, the predisposing factors are divided into two groups i.e. environmental factors and personal factors. These two play a role in accident production in varying proportions and no accident can be said to be due to one factor only. Though such a study is difficult, it is a necessary preliminary to an accident control programme.

Kamel (1975) quotes that 95% of the industrial accidents are preventable and 90% of these preventable industrial accidents are due to human factors, only 10% being due to environmental factors. Therefore, a detailed study of the human factors involved will go along way in preventing such accidents.

2.1. Definitions:

1. An accident is an unexpected, unplanned occurrence which may involve injury (I.L.O. Encyclopaedia of Occupational Health & Safety, 1971, Vol.I). This is a general definition embracing accidents at home, while travelling, at play and at work.

2. For statistical purposes the Tenth International Conference of Labour Statisticians in I962 defined accidents as including all cases of death or lesions arising out of or in the course of employment and used employment injuries to cover (a) all injuries resulting from accidents arising out or in the course of employment and occuring at the place of work,(industrial accidents) or (b) on the way to and from work (commuting accidents)& (c) all occupational diseases (I.L.O. statistics of Industrial injuries, I970).

Definition 2 is specific for injuries resulting from industrial accidents whereas definition I includes dangerous occurrences which though by chance may not have caused injury, are liable to cause injury. Though a study based on definition I would be more helpful for establishing preventive methods, it may have more limitations due to a higher rate of incomplete recording of dangerous occurrences than the recording of personal injuries as reflected by a study which indicated that many establishments neglect their obligations as required by law,(Bishara, I979). Therefore, definition 2 (a) is used in this study.