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شبكة المعلومات الحامعية

بسم الله الرحمن الرحيم



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سامية محمد مصطفي



شبكة العلومات الحامعية



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم





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شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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A STUDY OF SOME RISK FACTORS OF OCCUPATIONAL INJURIES IN A TEXTILE FACTORY IN TANTA

THESIS

Submitted in partial fulfillment of the requirement for Master Degree in Industrial Medicine

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صدق الله العظيم

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INTRODUCTION

Definitions:

According to Labour Act No. 137 (1981) Egyptian Authorities defined work injuries as "those injuries occurring at work place as a result of the work itself or by fire or explosion causing lesion to some parts of the body of workers and resulting in loss of at least one working day. Work injuries also include those injuries that occur on the way to and from work."(1)

Occupational injury is any injury that results from a work accident or from an exposure involving a single incident in the work environment. Occupational injuries may be **disabling** when they involve days away from work or days of restricted activity, or they may be **fatal** when resulting in death, regardless of the time between injury and death.(2,3,4)

Occupational accidents may be also defined as unplanned occurrences at work place which result in injuries to workers and loss of production or damage to property and assets. (5,6,7) Occupational accidents result from an interaction of three main factors: the person (host); the agent; and the environment. An accident may occur due to a chain of events in which something has gone wrong, resulting in an undesired condition. (8,9,10) Preventing accidents is extremely difficult in the absence of an understanding of their causes. (5)

Commuting accidents mean off-the job accidents sustained by worker during his travel from his home to his place of work or during his return journey home. (11) Off-the-job accidents affect operating costs and production schedules as much as when employees are injured on the job, all injuries are waste of valuable manpower. The principal aim in preventing off-the-job accidents is to get the employee to use the same safe practice in his outside activities as those he uses on the job. (12)

The Tenth International Conference of Labour Statisticians (1962) established international definitions of fatalities, permanent disablement and temporary disablement as follows:

Fatalities: Accidents resulting in death.

Permanent Disablement: Accidents resulting in permanent

physical or mental limitation or

impairment.

Temporary Disablement: Accidents resulting in incapacity for

work for at least one full day beyond the

day in which the accident occurred. (13)

Accidents at work are important causes of personal and national loss, both in terms of loss of lives and loss of working time.⁽¹⁴⁾ Accidents rates show considerable fluctuation between different industries. ⁽¹⁵⁾ In Egypt, the prevalence of occupational injuries and diseases resulting from industrial accidents has been reported as higher than the prevalence of all endemic diseases some time ago.⁽¹⁶⁾

t,

Occupational injuries are caused by acute exposure in the work place to physical agents such as mechanical energy (causing damage to tissue), electricity or thermal (causing burns or scalds), ionizing radiation, and chemicals (causing poisoning). Examples of such events include being caught in parts of machinery and being struck by tools. Resultant injuries include fractures, lacerations, abrasions, burns, amputations, and damage to internal organs.^(17,18) Yet, work related injuries are preventable because they are caused by identifiable agents in the working environment. ⁽¹⁹⁾

A safe work environment should include identification of potential safety hazards as well as the implementation of hazard control and safe work practices and procedures to keep workers safe. Workers are responsible for following established procedures and for reporting safety hazards to employers. (18)

Few studies were interested in accidents occurring in the textile industry. Textile industry is considered first that human being has done during old centuries. Primitive fabrics were discovered in museums of Switzerland and Danish. Meanwhile, during pharoanic time, old pharoas manufactured clothes from Lenin and they used dyes of plant origin. (20)

In Egypt, the manual cotton textiles manufacture started in the year (1911) then shifted to mechanical manufacture by the year (1927) which is considered the real start of Egyptian cotton Spinning & Weaving at El-Mahalla El-Kobra. Since then this industry is continuing

to grow. (20) In Egypt, 70% of export is cotton and its derivatives which proves the importance of Spinning industry to our national income. (20)

Accident Causation Theories:

Many attempts have been made to develop a prediction theory for accident causation through researches from different fields of science and engineering personal, which will help to identify, isolate and ultimately remove the factors that contribute to or cause accidents. A brief outline of various accident causation theories is here presented:⁽⁵⁾

A. The domino theory:

Proposed a "Five-Factor" accident sequences in which each factor would actuate the next step. The removal of a single factor early in the sequence would interrupt it and would prevent the accident and resultant injury.

- 1. Social problems.
- 2. Work fault.
- Unsafe act together with mechanical and physical hazard.
- 4. Accident.
- 5. Damage or injury.

B. Multiple causation theory:

It postulates that for a single accident there may be many contributing factors that may be grouped into two categories:

Behavioural: Such as improper attitude, lack of knowledge,

lack of skills and inadequate physical and

mental condition.

Environmental: Improper guarding of the other hazardous

work condition and faulty equipment.

C. Pure chance theory:

Everyone of the workers has an equal chance of being involved in an accident. All accidents are treated as acts of God and there exist no interventions to prevent them.

D. Biased liability theory:

Is based on the view that once a worker is involved in an accident, the chances of the same worker becoming involved in future accidents are either increased or decreased as compared to the rest of workers according to his liability.

E. Accident proneness theory:

It maintains that within a given group of workers, there are workers who are more liable to be involved in accidents. (5)