Disability in Workplaces

Thesis

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List of Abbreviations

AMA Guides	American Medical Association's Guides to the Evaluation of Permanent Impairment
AOE	Arising out of employment
BLS	Bureau of Labour and Statistics
CDC	Centers for Disease Control and Prevention
COE	"Course of employment"
dB	Decibel
EDs	Emergency departments
FB	Foreign body
FCE	Functional Capacity Evaluation
FUPIRS	Florida Uniform Permanent Impairment Rating Schedule
ICD-10-AM	International Statistical Classification of Diseases and Related Health Problems, 10th revision, Australian Modification
ILO	International labour Organization
JAMA	Journal Of the American Medical Association
MLE	Medico Legal Expert
MMI	Maximal medical improvement
NDS-IS	National Data Standards for Injury Surveillance
NEISS	National Electronic Injury Surveillance System
NIHL	Noise-Induced Hearing Loss
NIOSH	National Institute of Occupational Safety and Health
OI	Occupational Injury
OP	Occupational Physician

OSHA	Occupational Safety and Health Administration
PAHO	Pan American Health Organization
PEI	Prince Edward Island
SPSS	statistical package for the social science
SSA	The Social Security Administration
TBI	Traumatic brain injury
US	United States
WHO	World Health Organization

Disability in Workplaces

Abstract

Work-related injuries and their disabling outcome remain a pressing worldwide health issue. Thorough knowledge of the trends of workplace disabilities is essential for development of strategies to better assessment and fair judgment. This study examines the circumstances, nature of the occupational injuries and disability among workers presented to the Forensic Medicine Authority in Cairo, Ministry of Justice during two years (2008 and 2009). The information used in this study obtained from reports written by Medico Legal Experts. There were a total of 142 cases of workplace disabilities in different establishments. The mean age was 31.8 years (SD=11.7). Most cases lie between 18 and 34 years of age. There were 10 adolescents below 18 years and 4 elderly above 60 years of age among the sample. **Limitation of joint movements** was the most frequent type of injury (49.3%), followed by **Fractures** and **Nerve, tendon or muscle injuries** (26.8%) each and then came amputation (21.8%). **Caught by machine** was the most frequent event (40%), followed by **falls/slips** (20%) then **hit by object** (13.4%). **Hands** were the most affected part of the body (28.2%) followed by **the back** (14.1%) then **lower limbs** (13.4%).After assessment by MLE, the highest number of workplace disabilities fell in the (0-20%) range presented in 86 victims (60.6%).Disabilities due to falls/slips and being hit by object scored the highest rating percentages, while sitting or standing for long periods scored the least.

Key words: workplace, disability, Medico-legal Expert (MLE).

INTRODUCTION

Workers represent half the world's population and are the major contributors to economic and social development. Their health is determined not only by workplace hazards but also by social and individual factors and access to health services **(WHO, 2007)**.

Work related injuries are a worldwide health problem because they involve a great number of workers, especially young people at productive age. They are also highly disabling, leading to major social and economic consequences (**Roberta et al., 2007)**.

A substantial part of the general morbidity of the working population is related to work. The ultimate goal of ensuring that all workers in the world enjoy full physical and mental health is still far from being achieved. Despite the availability of effective interventions for occupational health, too many workers are still exposed to unacceptable levels of occupational risks and fall victim to occupational diseases and work accidents, lose their working capacity and income potential, and still too few have access to occupational health services **(WHO, 2006)**.

According to the fifth edition of the Guides to the Evaluation of Permanent Impairment, published by the American Medical Association (AMA), disability is defined as "an alteration of an individual's capacity to meet personal, social, or occupational demands because of impairment" **(Cocchiarella et al., 2000)**.

Disability may be temporary or permanent, and it may be partial or total **(Edward, 2008).**

According to the **AMA Guides**, impairment is an alteration of an individual's health status that has been assessed by medical means. Impairment is used to describe a static or stable condition that has had sufficient time to allow optimal tissue repair and that is unlikely to change, despite further medical or surgical therapy. **The Florida Impairment Schedule** defines impairment as anatomic or functional abnormality or loss after maximal medical improvement (MMI) has been achieved **(Hunter, 2005).**

Many workers' compensation systems allow for partial disability, generating a need for the AMA Guides to measure the extent of the impairment as related to normal functional capacity **(Edward, 2008).**

All injuries or occupational diseases deemed compensable must "arise out of" or occur "in the course of" employment. This confirms the idea that the work-related injury or occupational exposure would not have occurred had the employee been engaged in non–work-related activities **(Kelly, 2010).**

Disability evaluation and rehabilitation professionals do not always agree on nomenclature and specific methodologies, and as a result, both the meaning and practice of assessing occupational disability vary **(Jasen and Stacy, 2009).**

This work was designed to promote forensic examination and assessment of workers disabilities- due to workplace accidents- in order to make workers compensation claims in front of civil courts more subjective, obvious and fair.

Aim of the work:

This work aims at studying the cases of disability in workplaces examined at Forensic Medicine Authority in Cairo through two years (2008 and 2009) to determine: Type of injury, Part of the body injured, Direct cause(event), Occupation, workplace and disability rating percentage. Gender, age group and residency are also put in concern.

I- INJURIES

• Definition:

The standard definition of an "injury" as used by WHO is: "Injuries are caused by acute exposure to physical agents such as mechanical energy, heat, electricity, chemicals, and ionizing radiation interacting with the body in amounts or at rates that exceed the threshold of human tolerance. In some cases (for example, drowning and frostbite), injuries result from the sudden lack of essential agents such as oxygen or heat" **(Krug et al., 2002).**

• Classification:

Injuries may be categorized in a number of ways; however, for most analysis purposes and for identifying intervention opportunities, it is especially useful to categorize injuries according to whether or not they were intentionally inflicted and by whom. According to **Holder, et al. (2001)** commonly used categories are:

- ❖ Unintentional (i.e. accidental); include road traffic injuries, falls, burns, poisoning, and drowning.
- ❖ Intentional (i.e. deliberate):
  - o Interpersonal (e.g. assault and homicide)
  - o self-harm (e.g. abuse of drugs and alcohol, self-mutilation, suicide)

- Legal intervention (e.g. action by police or other law enforcement personnel)
- War, civil insurrection and disturbances (e.g. demonstrations and riots)

❖ Undetermined intent.

Injuries are also classified based upon the place of injury: domestic injuries, injuries at public places, and the settings of injuries: recreational injuries and occupational injuries (including industrial and agricultural injuries) **(WHO, 2002).**

• Mechanism:

The energy causing an injury may be:

❖ Mechanical (e.g. an impact with a moving or stationary object, such as a surface, knife or vehicle)

❖ Radiant (e.g. a blinding light or a shock wave from an explosion)

❖ Thermal (e.g. air or water that is too hot or too cold)

❖ Electrical

❖ Chemical (e.g. a poison or an intoxicating or mind-altering substance such as alcohol or a drug**)**

(Holder et al., 2001).