

SAFETY – A PERSONAL FOCUS

K. P. Sankaranarayanan Nair

School of Engineering

Cochin University of Science and Technology, Cochin – 682 022.

SYNOPSIS

Accidents are said to be due to carelessness, but if we ask what carelessness, we too often get an answer that implies that carelessness is something that shows itself in having accidents. To give a name is not to give an explanation, and if we are to study the human factor in accidents seriously we must do something more than name mental qualities which are assumed to be the cause of them.

INTRODUCTION

Every year, throughout the world, millions of industrial accidents occur. Some of them are fatal and some result in permanent disablement, complete or partial, the great majority causes only temporary disablement, which however may last several weeks. Every accident causes much suffering and pain to the victim, anguish to his family and many, especially those resulting in death or permanent disablement- may have a catastrophic effect on family life.

A general idea of the magnitude of the problem can be gained when we consider that over 15 million occupational accidents occur throughout the world every year- a staggering number when considered in terms of the suffering, sorrow and waste they cause. Japan and USA report over 2 million accidents every year while France, West Germany and Italy report over one million. In India the number of industrial accidents causing reportable injuries are about 3 Lakhs in an year excluding mines, ports and railways. Of these above 600 accidents are fatal. In Kerala the number of reportable accidents are around 4000 and fatal 10-12 annually.

Safety is the measure of the relative freedom from risks or dangers. Safety is the degree of freedom from risks and hazardous in any environment – home, office, factory, mine, schools, or their environs. Some risks are more easily reduced or eliminated than others.

The word safety is widely used, yet few people seem to agree on its actual meaning. Numerous researchers have attempted to define or describe it. Some of the definitions are “safety is the prevention of accidents and the mitigation of personal injury or property damage which may result from accidents”. Safety in a condition or state of being resulting from the modification of human behaviour, and/ or designing of the physical environment to reduce the possibility of hazardous, thereby reducing accidents.

Although these definitions vary in length and complexity, a common bond that lies them together in the notion that safety involves accident prevention and mitigation. An accident can be described “ a sudden, unplanned event which has the potential for producing injury or damage. Classic examples of accidents include motor vehicle collisions, falls in the home, fires and the unintentional discharge of weapons. Most of the time their occurrence is sudden and unplanned, and has the potential for causing injury and damage.

Individual behaviour is clearly important to accident causation; emphasis on personal responsibility ignores the important role of the social political economic and physical environments that largely determine behaviour. Often please for safer life styles are likely to be ineffective. Efforts to modify individual behaviour will continue, but other successful approaches should be utilised that give automotive protection without requiring any special action on the part of there being protected.

There are two major attributes of accidents unintended “causes” and undesirable “effects”. These two factors seem to constitute the major elements of most definitions of the term “accident”.

Traditionally safety personnel have concentrated their efforts in two areas

1. Accidents prevention – Developing ways to eliminate the occurrence of these unplanned potentially damaging events, and
2. Accident mitigation- Developing methodologies that reduce the damage caused by these unplanned events.

An example of accident prevention would be the control of fire hazardous in the home. Ensuring that electrical sockets are not overloaded, storing flammable materials outside the house in a shed, and carefully following manufacture’s instructions when using a wood burning stove or kerosene heater are methods of fire prevention. In terms of fire safety in the home, mitigation would entail such things as installing smoke detectors and fire extinguishers as well as developing plans of escape. Mitigative efforts would not prevent the occurrence of an accident, but could lessen the effects.

Safety is an ever –changing condition in which one attempts to minimize the risk of injury, illness, or property damage from the hazardous to which one may be exposed.

To better use the definition of safety, one must have an understanding of the term’s injury, hazard, and risk. The word injury (hurt, damage, or loss sustained) comes from the Latin words in and jus, meaning “not right” .For the purposes of this text, injury will be defined as any kind of damage to the body resulting from a single exposure to some type of energy or force. For example, motor vehicle injuries are manifest almost immediately after victim impact with another object (that is, the victim’s face and windshield, dashboard, or steering wheel)

On the other hand, illness from the standpoint of our definition of safety can be defined as damaged to the body resulting from repeated exposures to some type of energy or force. Illness generally occurs after a number of weeks or months. Children who suffer lead poisoning from chewing paint from windowsills may not exhibit problems for several months. The same is true for workers in the poultry industry who affecting the hands. This condition is the result of repeated stresses placed on the wrists of workers who use scissors like devices to cut the poultry into pieces. It may take several years for this condition to appear.

Two of the terms in our definition of safety, hazard and risk, are interrelated hazard is defined as a condition or set of condition that have the potential to produce injury and /or property damage. A hazard by itself will not produce injury; it needs an outside stimulus to activate it and thus cause harm. An open container of gasoline may be categorized as a hazard; however, it won't cause harm until it is activated by a heat source such as a cigarette.

Risk refers to the probability that a hazard will be activated and produce injury or property damage. Risk involves two components: 1) the likely hood that a negative situation will occur, and 2) the severity of injury or damage if the hazard is activated.

A safe individual is one who can enjoy the greatest benefits at the lowest possible risks and cost (both physical and psychological). The concept of minimizing risks and controlling hazards to maximizes the quality and quantity of people's lives.

Another injury control model involves the four factors of safety that plays a major role in the performance of any activity. These factors include:

- 1 Understanding the difficulty of the activity
- 2 Ability level of the performer
- 3 Immediate state of the performer
- 4 Condition of the environment

Physical factors

When considering the possible causes of injuries there can be no dispute over the probability that some 'accidents' are caused by unidentified physical deficiencies in the individual or physical maladjustment's that are recognized but not allowed for. This consideration centers on the type of cause in which for example, a worker has faulty and uncorrected vision, unknown to him and his employers, and is placed at a job where his deficiency is responsible for an accident. It is no uncommon to consider such factors within the areas of psychological aspects since they may be detected, modified or corrected through that phase of the safety programme that deals directly with the worker.

The related physical factors are

- a) Vision
- b) Reaction Time
- c) Relationship between perception and muscular response and injuries

- d) Relationship between intelligence and injury experience
- e) Hearing
- f) Age
- g) Experience
- h) Emotional instability
- i) Marital status

Other factors

- 1 Fatigue,
- 2 Illumination & Noise,
- 3 Atmospheric condition,
- 4 Job stress

In summary, it may be said that the study and solution of behaviour related safety problems couldn't proceed simply in a one-dimensional mode. The psychological aspects of safety are varied and function at many levels of complexity, this requiring a quite refined approach to their manipulation.

Ultimately, safety and health in the workplace is team effort; Government, Industry and the Labour force must work together. At the government level, federal and state agencies are responsible for collecting data, conducting research and developing guidelines to keep pace with the changing needs of the workforce. At the management or company level lies the key leadership role. The development of a well – organised and planned safety programme can maximize workers safety while increasing productivity and profits. At the worker level, each employee has a responsibility to follow safety procedures sand instructions in his or her job. Safe and healthful conditions can be assured for the Indian workers only with these co-ordinated efforts.

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