risk of violence may be improved with the help of the information sheets of the KAURIS method. The training of the personnel is an important part of improving safety.

Conclusions
Violence at work is a complex problem which demands multifunctional actions and cooperation among researchers, the authorities, employers’ and employees’ organizations, enterprises and other relevant groups. The systematic prevention of workplace violence ensures undisturbed working conditions and increases job satisfaction, as well as the well-being of the customers.

The KAURIS method is a practical tool which workplaces can use to support their violence prevention programmes. A well-operating safety control system ensures that the work can be done without disturbances, and the mental stress of the workers will decrease.

References

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Violence at workplaces

M. Adamson
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“Violence in the workplace has become an epidemic. Not only is workplace violence increasingly common in those workplaces where violence is expected – for example corrections, law enforcement and mental health – but in almost every occupation that deals with the public.”

(Occupational Safety and Health Administration)

Introduction
Violence has become an everyday reality for many workers, from bus and train drivers to teachers, residential and bank security personnel, domestic servants, nurses and aircraft crews. Shrouding such a serious subject in silence and secrecy is counterproductive.

Every week people are abused, threatened and beaten up simply because individuals with whom they have to deal as part of their job turn violent. Many people suffer minor or major injuries, and the psychological effects – stress, depression, even fear of work – can be even worse. The most effective solutions can only be achieved through an active partnership of all the actors concerned.

This short introduction to violence at workplaces is intended to provide brief answers to a number of questions. These include: What is violence? What are the risk factors of violence at workplaces? What are the types of violence prevalent at workplaces? What is the cost of violence at workplaces? How can violence at workplaces be prevented?

What is violence?
Violence is defined as any incident in which an employee is abused, threatened or assaulted by a member of the public in circumstances arising from his or her employment.

Erwin (2001) supports the above definition when he states that violence is the outcome of disputes or adverse interpersonal relations between employees and maintains that violence at workplaces is not just limited to physical assault, but can also include near misses, verbal abuse and sexual harassment. Even the fear of assault among co-workers can have serious health effects.

What are the risk factors of violence at workplaces?
There is a very dangerous common myth that violence at workplaces is essentially random and unpredictable. Because we cannot predict it, we cannot do anything about it. However, experts have compiled a long list of risk factors that are utilized to predict violence; these include the work environment, work practices, and victim/perpetrator profiles.

Environment factors that predict violence include: a violent society; a violence-prone neighbourhood; a large number of weapons in circulation; the early release of mental patients; and the hospitalization of criminals instead of incarceration and the threat of penalties for injuries to patients or clients.

Workplace practices that predict violence include: low staffing levels; solitary work; working with money; and long waiting times for customers, clients or patients requiring services, or a lack of easily accessible services.

Perpetrator profiles that predict violence include: mentally ill persons who are not properly supervised or treated; gang members; and relatives of injured persons who are also prone to violent acts.

Victim profiles include:
• Employees who work in homes or in the community
• People who handle money
Workers in institutions for the mentally ill or retarded who are not trained in avoidance or self-defence  
Persons who provide care, advice, and information; such people include health care workers, mental health workers, emergency room and admission workers, and workers in social services  
People who deal with complaints related to such matters as social services, child welfare and unemployment  
Workers who have the power to take measures against the public, inspect premises and laws; such people include inspectors, child welfare officers, law enforcement personnel and security guards.

What are the types of violence prevalent at workplaces?

Violence at workplaces occurs in a variety of forms, ranging from violence perpetrated by strangers, by customers or clients, by co-workers, and within the context of personal relationships. These types of violence at workplaces are described in detail below.

VIOLENCE PERPETRATED BY STRANGERS: This involves verbal threats, threatening behaviour or physical assaults on the part of an assailant who has no business to be at the workplace. For instance, a person may enter the workplace in question to commit a robbery or criminal act. This type of violence is responsible for the majority of fatal injuries related to workplace violence nationally.

VIOLENCE PERPETRATED BY CUSTOMERS: This involves verbal threats, threatening behaviour or physical assaults on the part of an assailant who is either receiving services from or is under the custodial supervision of the workplace in question or of the victim. These assailants could be current or former customers or clients, such as passengers, patients, students, inmates, criminal suspects or prisoners.

VIOLENCE PERPETRATED BY CO-WORKERS: This involves verbal threats, threatening behaviour or physical assaults on the part of an assailant who has some employment-related involvement with the workplace. These assailants could include a current or former employee, supervisor or manager. This type of violence accounts for a much smaller proportion of fatal workplace injuries than violence perpetrated by strangers.

VIOLENCE WITHIN THE CONTEXT OF PERSONAL RELATIONS: This involves verbal threats, threatening behaviour or physical assaults on the part of an assailant who, in the workplace, confronts an individual with whom he or she has or had a personal relationship outside of work. Personal relations include those involving a current or former spouse, lover, relative, friend or acquaintance. The assailant’s actions are motivated by perceived difficulties in the relationship or by psycho-social factors that are specific to the assailant.

What is the cost of violence at workplaces?

It is important to note that violence at workplaces has an immediate effect on the victim and expands in progressively larger ripples, directly or indirectly affecting other people as well as the enterprise and the community.

The following estimates give some indication of how much workplace violence costs:

- In Germany, the direct cost of mobbing in an enterprise of 1,000 workers has been calculated at DM 200,000 per year, plus indirect costs of DM 10,000 per year
- In the United States, a study by the National Safe Workplace Institute estimated that workplace violence cost employers a total of more than USD 4 billion in 1992
- In Canada, the British Columbia Workers’ Compensation Board has reported that wage-loss claims by hospital workers due to acts of violence or force have increased by 88 per cent since 1985
- In New Zealand, the cost of labour market income forgone due to work days assumed to be lost through family violence is calculated to have been at least NZ $1.2 billion in 1993/94. (The sources for these figures are given in the ILO report listed under References.)

The impact and cost of violence at workplaces must also be considered at a number of different levels.

Individual level: Here the suffering and humiliation resulting from violence usually lead to lack of motivation, loss of confidence and reduced self-esteem, depression and anger, anxiety and irritability. As with stress, if the causes of violence are not eliminated or its effects contained by adequate intervention, these symptoms are likely to develop into physical illness, psychological disorders, and tobacco, alcohol and drug abuse. They may culminate in occupational accidents, invalidity and even suicide.

Workplace level: Violence causes immediate, and often long-term disruption to interpersonal relationships, to the organization of work and to the overall work environment. Employers bear the direct cost of lost work and stricter security measures. They are also likely to bear the indirect costs of reduced efficiency and productivity, the deterioration of product quality, a less favourable company image and a reduction in the number of clients.

Community level: The costs of violence include health care and long-term rehabilitation costs for the reintegration of victims, unemployment and retraining costs for victims who lose their jobs as a result of such violence, and disability and invalidity costs where the working capacities of the victims are impaired by violence at workplaces.

How can violence at workplaces be prevented?

Whatever the cause of violence, employers have the duty to protect the health, safety and welfare of employees whilst they are at work. Employers must therefore assess threats to their staff and work out how they can eliminate or minimize these threats.

The following are indicators that can signal the risk potential of violent episodes:

- Sudden and persistent complaining about being treated unfairly
- Blaming of others for personal problems
- Sudden change in behaviour, deterioration in job performance
- A worker’s statement that he or she would like something bad to happen to supervisor or another co-worker
- Paranoid behaviour
- Sexual harassment, or an obsessing about a co-worker: sending unwanted gifts, notes, unwanted calling, stalking
- Increased demand for supervisors’ time
- Alcohol or drug abuse
- Talking to oneself
- Instability in family relationships
- Financial problems combined with not receiving a raise or promotion
- Poor relationships with co-workers or management
- History of violent behaviour
- Carrying a concealed weapon, or
Abstract
Chemicals have played an important role in improving the lives of millions of people worldwide. The use of chemicals has been integrated into every aspect of human life. In agriculture, the safe and effective use of agrochemicals, especially pesticides, has successfully been carried out to solve various problems. These include: hunger, pre- and post-harvest losses due to insects, weeds, fungi; and vectors of human and animal disease. In doing so, this process has had tremendous impacts on economic developments in many countries.

This paper attempts to put the need for this group of chemicals in agriculture in perspective while addressing the safety parameters needed in handling, application, and disposal, with public and environmental concerns being taken into consideration.

Introduction
The primary objective of agriculture is to produce a reliable supply of food for the increasing world population. It plays an important role as a source of food, of foreign exchange for imports, and of exports, employment and imports for other sectors in the economies of many industrialized countries as well as developing ones. This is reflected in a summary of the agricultural labour force

Table 1. Agricultural labour force and export earnings in eastern and southern African countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Agricultural labour force (% of population)</th>
<th>Agricultural exports (% of total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethiopia</td>
<td>79</td>
<td>88</td>
</tr>
<tr>
<td>Kenya</td>
<td>78</td>
<td>?</td>
</tr>
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<tr>
<td>Zambia</td>
<td>66</td>
<td>15</td>
</tr>
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</table>

Source: FAO (1) reports containing surveys of crop protection for Ethiopia, Kenya, Malawi, Mozambique, Somalia, Sudan, Tanzania, Uganda, and Zambia.

References