



INJURIES AND PUBLIC HEALTH

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Abstract

Injuries pose a public health problem. This global crisis affects persons in various stages of development in the home, at work on the roads and other transport media. Governments must commit resources to curtail the prevalence and menace of injuries.

Background

Five (5) million deaths are recorded every year due to injuries. Young people aged 15 to 44 years account for nearly half of all injury-related deaths worldwide, constituting a sizable proportion of a country's economically productive workforce (WHO, 2023). Causes of injuries include road traffic crashes, falls, drowning, burns, poisoning and acts of violence. Globally, road traffic-related injuries are the second highest cause of ill health and premature death, and families would normally spend resources to help the injured family member (WHO, 2023). Being young, male, and of poor socioeconomic class, for example, all raise the chance of injury. The risk of injuries from falls rises with age.

Alcohol or substance use, inadequate adult supervision of children, poverty, economic and gender inequality, unemployment, unsafe housing, schools, roads, and workplaces, inadequate product safety standards and regulations, firearms, knives, and pesticides constitute risk factors and determinants of many injuries. It is thus important that emergency trauma treatment services are available to all persons as a lack or inequitable access could worsen the repercussions of injuries.

Based on settings, injuries may mainly be home injuries, occupational injuries, and road traffic injuries. Most injuries may not be severe and may not result in clinical care, but many are work-limiting (Bovbjerg et al., 2019). Injury disparities have been discovered in relation to rural life, age, gender, low income, and certain ethnic groups. Falls and cuts/piercings may be the most common mechanisms of injury in both home and work-related accidents; non-fatal burns and scalds are common home injuries (Pant *et al.*, 2021). Injuries are life-threatening and could affect the economic status of a household. It is a threat to the physical, mental and social wellbeing of person and a household in general. Even during training many force men sustain injuries especially at the joints even though rescreening techniques could be advantageous, and efforts should be made to select and educate physically resilient personnel (Sawyer *et al.*, 2021).

Epidemiology

Injuries kill around 4.4 million people worldwide each year as of 2021, accounting for nearly 8% of all deaths. Unintentional injuries account for 3.16 million of these injuries, while intentional injuries account for 1.25 million. Traffic accidents are the most common cause of fatal injury, accounting for almost one-third of all injury-related deaths. Suicide accounts for one-sixth of all deaths, whereas homicide accounts for one-tenth. Every year, tens of millions of people require medical treatment for nonfatal injuries, and injuries account for



roughly 10% of all years lived with disability (WHO, 2021). Men are twice as likely as women to die as a result of an injury. Injuries killed 367,000 children under the age of five in 2013, a decrease from 766,000 in 1990 (GBD 2013 Mortality and Causes of Death Collaborators, 2015). In sub-Saharan Africa, the prevalence of injury ranges from 12 % to 28 % (Diamond *et al.*, 2018). A study in Nepal found that 27 % of patients who present with injury are children (Magnus *et al.*, 2021). For children and young adolescents, drowning is the sixth highest cause of mortality. Falls kill about 684,000 people each year and constitute a significant and under-recognized public health problem. Injuries are major causes of mortality and morbidity burden in all countries; however, they are not fairly distributed across or even within countries; some people are more vulnerable than others depending on the circumstances under which they are born, grow, work, live, and age. Unintentional injuries account for about 95 % of all injuries and only 5 % for intentional injuries among children and adolescents (Yin *et al.*, 2020). In public places, over three-quarters of all intentional injuries could occur. Half of the unintended injuries happened are more likely to happen at home, with the other third occurring in public places. In intentional injuries 39 % of lives are claimed, and left 56% disabled; however, only 7.3 % of unintentional injuries could be fatal, but 77 % may result in disability (Lafta *et al.*, 2015).

Risk factors

Physical injuries are more likely associated with demographic, occupational and societal risk factors (Chweya *et al.*, 2021). Injuries are age-related; the young usually experience injuries from falls, the middle-aged from road accidents and the older adults from assaults. Females are more likely to report injuries than males (Chweya *et al.*, 2021); however, Gatheca *et al.* (2018) earlier reported male to be associated with injuries. Males are more likely to take jobs that pre-dispose them to injury due to masculinity. Yin *et al.* (2020) recounts that boys, older children, and children and adolescents coming from rural areas are more likely to experience intentional injuries. Excessive alcohol drinking (Diamond *et al.*, 2018), smoking and poverty are among the causes of injuries in households and outside the home (Gatheca *et al.*, 2018). Injuries in sub-Saharan Africa are mostly caused by transports, burns, sharp objects, and chemicals (Diamond *et al.*, 2018). Poverty also raises the likelihood of injury and violence. Low- and middle-income nations account for over 90% of all injury-related deaths. Injury fatality rates are greater in low-income countries than in high-income countries worldwide. Even within countries, people from lower-income families had a greater rate of fatal and non-fatal injuries than people from higher-income families. Even in high-income countries, this is true. Several risk factors contribute to the uneven distribution of injuries, which makes them more prevalent among the less fortunate. These include living, working, traveling, and attending school in more dangerous settings, a decreased emphasis on preventative efforts in underprivileged neighborhoods, and a lack of access to appropriate emergency trauma care and rehabilitation programs (WHO, 2021). Partner and spousal related injuries have also been reported by Diamond *et al.* It is possible that the prevalence of partner-related injury will be underreported for fear of victimization of partner.

Even on playgrounds, children experience injuries due to a number of risk factors including absence of handrails and guardrails on equipment at playgrounds, adult supervision, playground hazards, and critical fall heights (Richmond *et al.*, 2018).

Men account for almost three-quarters of all road traffic fatalities, four-fifths of all homicide deaths, and two-thirds of all combat fatalities worldwide. However, in many low- and middle-income nations, women and girls are more likely to be burned than men and boys, owing to exposure to dangerous cooking arrangements and energy poverty. Males across all ages die from road traffic injuries, homicide, and suicide, whereas females die from road traffic injuries, falls, and suicide (WHO, 2021).



Management

Injury management is a planned and integrated management strategy that includes early intervention with suitable, adequate, and timely interventions based on needs assessment (La Trobe University, 2017). Injury prevention, alcohol cessation, and the construction of regional trauma systems that would accelerate the examination and care of badly injured patients could be helpful in the management of injury and reduction of deaths due to trauma (Hemmila & Wahl, 2014) and injury. Injury management can only be effective when it begins as soon as an injury is reported and takes into account the individual's personal well-being as well as their physical healing (La Trobe University, 2017). In trying to assist a victim with injury, care must be taken to move the injured individual only if there is a risk of further harm; if the injured person is bleeding, mild pressure is usually applied to the wound with a dry cloth (ENS, 2023). It is critical to note that the damage from certain injuries impacts not just the patient's physical health, but also his or her mental health and quality of life. Persons with burn injuries cannot be deemed recovered once the wounds have healed; rather, burn injury causes long-term fundamental changes that must be addressed in order to maximize quality of life. As a result, burn care clinicians face a slew of obstacles, including acute and critical care management, long-term care, and rehabilitation (Jeschke *et al.*, 2020).

Prevention and Control

Injuries and violence are predictable, and there is convincing scientific evidence for what works to prevent and cure the effects of injuries and violence in a variety of situations. Road traffic campaigns that enforce helmet wearing, use of seatbelt and not drink driving should be intensified to curb the menace of injuries from transport-related injuries (Gatheca *et al.*, 2018). Additionally, James *et al.* (2020) reported improvements in healthcare systems, investments in injury prevention programmes and, vehicle safety testing, as strategies that have been used for the prevention and control of injuries. The goal for the prevention of injuries is to reduce associated morbidity and mortality rates. High income countries who have reduced mortality due to injuries have achieved same through multisectoral approach involving the transportation system including roads, vehicles and road users (Norton & Kobusingye, 2013). This significantly tackles road traffic-related injuries. The prevention of injuries requires increases in knowledge levels and behavioural changes. Campaigns tailored towards injury prevention from the standpoint of public and community health, through innovative ways that engage audience before an injury happens, are catalysts for transforming injury-related attitudes and behaviours among the adult population (Smith *et al.*, 2018).

It is important that modifications are made to playgrounds to avert injuries to children; Richmond *et al.* (2018) suggests the modification of surfaces to be impact-absorbing and reduction of height of equipment to below 1.5 m to manage fall heights. The guidelines to backgrounds safety must be adhered to by managers during design, fabrication, installation and maintenance of playground equipment. Since compliance to such standards for managing playgrounds could be burdening, natural environment-inspired playgrounds without artificial equipment could offer better alternatives to prevent or at least reduce playground-related injuries (Richmond *et al.*, 2018).

Injuries and violence impose a tremendous strain on national economies, costing governments billions of dollars in health-care costs, lost productivity, and law enforcement each year. Preventing injuries and violence will help to fulfill various Sustainable Development Goals (SDGs) (WHO, 2021).

Conclusion



An injury can be caused by physical trauma, penetrating trauma, burning, toxic exposure, asphyxiation, or overexertion and can occur purposefully or inadvertently. Injuries can occur in any portion of the body, and various injuries cause different symptoms. A serious injury is normally treated by a health expert, and the treatment varies greatly depending on the severity of the damage. Traffic accidents are the leading cause of accidental injury and injury-related death among humans. Injuries are distinct from chronic diseases, psychological stress, infections, or medical procedures, though injury can play a role in any of these. There is emphasis on the importance of developing and implementing injury prevention programs and policies that address geographical and sociodemographic disparities in injury incidence, as well as specific home-related and work-related injuries.

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