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Injury prevention and health promotion: A global perspective

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1 | INTRODUCTION

Since its inception 27 years ago (1990), the *Health Promotion Journal of Australia* has featured many articles on aspects of injury prevention, particularly noticeable during the past five years. With this issue, it will be only the second time the journal has launched a Special Issue on injury prevention, the first one appearing in Volume 1, issue 2, in 1991.[1] As editors of the current issue, we felt the dedicated emphasis on injury prevention and health promotion in the journal is long overdue, given that our careers in injury prevention have changed considerably since the first Special Issue was published (and that a new cadre of health promotion professionals have entered the field). Therefore, we believe it is timely and important to feature some of the recent research focusing on injury prevention and health promotion.

2 | INJURIES AND VIOLENCE

In addition to the many preventable diseases that are seen in the practice of health promotion, there is one health threat that the public still accepts as a *fait accompli*—injuries. Injuries, which include both unintentional injuries and violence, are a major public health problem impacting individuals, families and the communities in which they live. Injuries and violence are widespread, affecting populations across the world.[2]

Every day, around the world, almost 16 000 people die from an injury—this accounts for 10% of the world's deaths, 32% more than the number of fatalities that result from malaria, tuberculosis and HIV/AIDS combined. Nearly one-third of the 5.8 million deaths from injuries are the result of violence and nearly another one-quarter are the result of road traffic crashes. Almost twice as many men than women die as a result of injuries and violence each year and traffic crashes are the main cause of death among young men worldwide. For every person who dies, thousands more are nonfatally injured— many of them are permanently disabled.[2]

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Injury rates are also generally higher in rural areas, as compared with urban settings.[3,4] This is often related to poverty, remoteness and residents' exposure to different hazards (eg, violence in large urban centres, pesticides in rural and agricultural areas and access to water bodies). The built environment can be protective (such as bridges for pedestrians over roads or rives); however, environmental factors can also contribute to higher injury rates in rural areas, for example higher speed limits on rural roads, poorer road conditions, and medical care that is less available in a timely fashion to those who are injured.[5]

3 | INJURY BURDEN

Both unintentional injuries and those caused by acts of violence are among the top 15 killers for both Australians and Americans of all ages.[6,7] They are the number one cause of death among children and adolescents and a leading cause of disability for all ages, regardless of sex, race/ethnicity or socioeconomic status. In the United States, more than 180 000 people die from injuries each year, and approximately 1 in 10 sustain a nonfatal injury serious enough to be treated in a hospital emergency department.[8] In Australia in 20112012, there were 11 192 injury-related deaths with an age-standardised rate of 46 deaths per 100 000 population and in 2014-2015, there were 484 000 occurrences of injuries requiring hospitalisation, a rate of 1966 per 100 000 population.[3,4]

In Australia in 2011, the top three causes of disability-adjusted life years (DALYs) (which quantifies both premature mortality [Years of Lost Life (YLLs)] and disability [Years Lost to Disability (YLDs)] within a population) were coronary heart disease, other musculoskeletal and back problems.[9] Injuries represent approximately 10 % of DALYs in Australia and the USA with injury categories such as transport, self-harm and falls causing a significant burden[10] (see Table 1).

Beyond their immediate health consequences, injuries and violence are a major contributor to poor mental health; high medical costs; and lost productivity.[11] The effects of injuries extend beyond the injured person to family members, friends, coworkers, employers and communities and are a major economic drain on nations, particularly in low- and middle-income countries which account for more than 90% of the injury burden.[12] Estimating the current cost of injury is challenging due to a limited number of studies, however, a recent study exploring cost of injury in Western Australia estimated the cost to be $9.6 billion in 2012,[13] the cost of injuries due to work in Australia was estimated at $28.2 billion in 2012-2013,[14] and the direct cost to the health system in 2015-2016 was $1.01 billion.[15]

4 | INJURY PREVENTION AND HEALTH PROMOTION

Injury prevention and health promotion share the common goal of reducing mortality and morbidity by bringing together coalitions and communities to develop and implement educational, behavioural and structural initiatives.[16,17] Injury prevention in Australia is at a nexus, and while we have been a world leader in a number of areas, there is still much to be done. We could better integrate injury prevention and health promotion and educate more on how to lower the risks of injury, as has occurred with other health issues such as cancer and heart disease. Perhaps this is in part due to the belief by the public that injuries are the result

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of "accidents," acts of fate, random events or acts of God. However, most events resulting in injury, disability or death are predictable and preventable, just as are many noncommunicable diseases. If the prevention of injuries and violence were considered by more health promotion practitioners as fundamental to their mission, perhaps many more deaths and disabilities could be prevented.

Injury prevention has a strong scientific foundation and many strategies are cost-effective,[18] yet effective interventions efforts are not fully implemented or integrated into community settings. Injury prevention and health promotion have a common appreciation of the multiple determinants of health[19] that include:

- *Individual behaviours:* The choices people make about their own behaviours, such as alcohol and drug use, vehicle speeding, helmet use, diving in shallow waters, nonuse of seat belts or other risks, often predispose one to injuries and are often connected with factors in the social and physical environment.
- *The physical environment:* Environments at home, in the community and on the road can affect the rate of injuries related to falls, fires and burns, traffic injuries, drowning and violence. Changing the environment can often make safe behaviours more salient.
- *Access to health services:* Access to health care services such as clinics, GPs, hospitals and diagnostic facilities can often determine the outcome of an injury event. Improved access to prehospital and emergency services, acute care facilities and rehabilitation services can reduce the consequences of fatal and nonfatal injuries, long-term disability and death.

Interventions approaches successfully used in health promotion are used to address injuries, for example modifications to the environment, strengthening legislation and enforcement, promoting education and behaviour change, and making products safer.[20] Using health promotion for injury prevention and control can help reduce health care costs and improve the quality of life, and should be encouraged by health planning agencies and health systems.[21]

This series of 14 articles reviews the burden of injuries and violence, evaluates the effectiveness of various interventions, discusses theories and methods that can be adapted for use in various population settings, and illustrates how interventions can be used to improve practice among minority and disadvantaged groups such as First Nation People. This Special Issue contains articles on alcohol and injury,[22–25] Aboriginal and Torres Strait Islander injury prevention,[26–28] child injury prevention,[25,26,29] drowning prevention,[29,30] falls,[27,31,32] farm safety,[33] first aid[34] and injury surveillance.[35]

There are examples in these articles of the benefits of creating, sustaining and growing injury prevention and health promotion and how professionals can contribute to the reduction of injuries and violence.[23,27] This compilation reinforces the importance of partnerships, as a way of strengthening injury prevention efforts.[32] These articles also reinforce the need to frame injuries and violence as predictable and preventable public health problems and the importance of identifying and implementing evidence-based interventions.

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[29–31,33] Educational and awareness-raising efforts targeted to inform the public and decision-makers are emphasised in this series of articles and can contribute to preventing and controlling injuries and violence, but also may provide support to strengthen the capacity of health systems to address injuries.[28,29]

Authors, reviewers and editorial staff associated with these 14 articles have invested time and energy into these research contributions in the *Health Promotion Journal of Australia.* Readers are encouraged to take every available opportunity to close the gap between the knowledge presented here and its application in their own community settings.[36,37] Applications of research findings to real-world settings are not easy, but are necessary to advance the impact of injury prevention efforts.[38] It is hoped that the articles in this issue of *Health Promotion Journal of Australia* will inspire public health and health promotion professionals around the world to look at the potential for improving health through taking action on injury prevention. The information contained in these articles encourages us to approach injury prevention with as much scholarship and rigour as has been devoted to other health promotion topics, such as physical activity, obesity, tobacco control, diabetes management and other noncommunicable and communicable diseases.[39] The time of act is now. What better future can we offer the health of nations than to promote a world free from injury?

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TABLE 1

Disability-adjusted life years (DALYs) and years lived with disability (YLDs) Australia and United States of America, 2016, both sexes, all deaths

	Australia				USA			
	DALYs	%	YLD	%	DALYs	%	YLD	%
All causes	5 424 054	100.0	2 962 423	100.0	92 575 358	100.0	43 043 639	100.0
Neoplasms	904 254	16.7	54 305	1.8	13 663 177	14.8	669 437	1.6
Mental disorders	775 165	14.3	714 885	24.1	12 026 372	13.0	10 150 448	23.6
Musculoskeletal disorders	712 453	13.1	700 912	23.7	9 030 859	9.8	8 831 568	20.5
Cardiovascular diseases	697 805	12.9	122 620	4.1	14 824 304	16.0	2 129 732	4.9
Other noncommunicable diseases	548 592	10.1	502 484	17.0	8 058 408	8.7	7 097 524	16.5
Injuries	478 051	8.8	206 948	7.0	9 520 619	10.3	3 211 679	7.5
Neurological disorders	447 983	8.3	272 284	9.2	6 157 079	6.7	3 503 422	8.1
Diabetes, urogenital, blood, and endocrine diseases	292 021	5.4	152 201	5.1	7 190 242	7.8	3 772 085	8.8
Chronic respiratory diseases	262 134	4.8	134 744	4.5	4 678 474	5.1	1 848 940	4.3
Communicable, maternal, neonatal, and nutritional diseases	192 803	3.6	82 700	2.8	4 477 806	4.8	1 314 640	3.1
Self-harm and interpersonal violence	143 003	2.6	11 461	0.4	3 101 267	3.3	278 319	0.6
Transport injuries	123 085	2.3	47 838	1.6	2 710 210	2.9	691 005	1.6
Self-harm	120 191	2.2	3216	0.1	1 933 933	2.1	59 596	0.1
Falls	111 808	2.1	84 215	2.8	1 852 627	2.0	1 389 083	3.2
Diarrhoea, lower respiratory, and other common infectious diseases	86 386	1.6	34 987	1.2	2 073 611	2.2	503 386	1.2
Neonatal disorders	71 398	1.3	27 561	0.9	1 477 840	1.6	431 950	1.0
Digestive diseases	58 624	1.1	15 610	0.5	1 241 203	1.3	442 178	1.0
Cirrhosis and other chronic liver diseases	54 167	1.0	2732	0.1	1 706 815	1.8	71 987	0.2
Interpersonal violence	22 815	0.4	8247	0.3	1 167 355	1.3	218 743	0.5
Other communicable, maternal, neonatal, and nutritional diseases	12 480	0.2	4272	0.1	196 577	0.2	64 188	0.1
Nutritional deficiencies	12 451	0.2	10 836	0.4	202 494	0.2	147 765	0.3
Drowning	10 329	0.2	514	0.0	208 546	0.2	8766	0.0
HIV/AIDS and tuberculosis	7373	0.1	3332	0.1	440 416	0.5	147 588	0.3

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