Community based intervention on adolescent risk taking: using research for community action

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Abstract

Objectives—To use research on adolescent risk taking behaviour as an impetus for a community to develop locally based injury prevention strategies.

Design—Case study, based on a community action model and formative evaluation. This involved: a community profile on adolescent risk taking behaviour; interviews with service providers; dissemination of research findings to local policy makers; development and implementation of a community action plan to address adolescent risk taking; and assessment of its impact.

Setting—A rural town with a population of 10 195 situated in the North Island of New Zealand.

Subjects—School aged adolescents and the safety policies and practices of community organisations involved with adolescents.

Results—Risk taking behaviours identified by the community profile included: drink-driving, substance abuse, carrying of weapons with intent to harm, and suicidal ideation. Community members identified that risk taking behaviour associated with alcohol in relation to: (1) violence (self directed and assault) and (2) road related injuries should be the focus of their activities. The strategies identified focused on advocacy, education, legal/regulatory change, and environmental modification. Evaluation conducted six months after intervention identified increased community awareness of the adverse effects of adolescent risk taking and some changes in policies and practice related to adolescent safety.

Conclusions—Providing a community with local information that has high relevance for its members may act as a stimulus for the development of injury prevention initiatives. While this case study illustrated that a comprehensive approach focusing on adolescent risk taking behaviour, rather than on isolated injury problems, may be an appropriate way to highlight escalating adolescent injury rates, it also demonstrates the limitations of a short time frame for a community development project.


Keywords: adolescent; risk taking; community; formative evaluation

Internationally, and in New Zealand, injury is the leading cause of death among adolescents. Adolescence is also often a time when risks are taken. Activities such as not wearing bicycle or motorcycle helmets and seatbelts, drink-driving, substance abuse, unprotected sexual intercourse, physical violence, and self mutilation, all have the potential to affect the health of young people and cause loss, concern, and costs to all levels of society. Recent reviews have shown that these high risk behaviours may be interrelated. It has also been suggested that a comprehensive approach that focuses on adolescent risk taking behaviour in general may provide a more effective injury prevention strategy than approaches targeted on specific injury problems. Providing local data to a community to increase their awareness of the need to develop strategies to prevent injury has been previously demonstrated. Very few, however, have focused exclusively on adolescents.

The community action model of research, which provided the framework for this work, is based on a number of assumptions that address both science and practice. From the perspective of research, studying adolescents in context is good science because these are the contexts in which adolescents live their lives. From the perspective of practice, local data are more applicable to that community and, as such, are more useful to local practitioners and policy makers (including parents who make policies in the home and influence community policies). In the language of social science, local community members often question the “external validity” of research conducted elsewhere. Furthermore, it has been shown that local residents are more likely to respond to programmes developed by members of their own community often in collaboration with outside researchers. This report describes the process of using research on adolescent risk taking behaviour to stimulate a community to develop locally based injury prevention strategies.

(1) Adolescent risk taking: a community action programme

This adolescent community action programme (ACAP) was conducted over an 18 month
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period between 1994 and 1995. The lead agencies were the Mental Health Foundation of New Zealand (MHF) and the Injury Prevention Research Centre (IPRC) based at the University of Auckland, New Zealand. Funding (equivalent to US$18 000) was provided by one of the four regional health authorities (North Health).

The criteria used to select a community were the need for the community: (i) to be located in the North Health region; (ii) to have a discrete geographical location; (iii) to have at least one secondary school; and (iv) to have a hospital within its boundaries. Riverdale (pseudonym), a rural town in the North Island of New Zealand, met the above criteria. It has a population of 10 195, with 15–19 year olds comprising 8% of the total population. Of these young people, 25% identify themselves as Maori (indigenous people of New Zealand) and 1% as Pacific Islanders. The remainder are of European descent.

The target audience for the ACAP were service providers and policy makers (including parents) associated with adolescents in Riverdale. All service providers and key policy makers within the education, health, welfare, justice, religious, local government, and recreation sectors participated in varying degrees in the development and implementation of the ACAP. Participation of parents was limited to those who attended the meetings (less than 20% of those eligible). Only a few members of the business community actively participated.

(2) Problem being addressed
The impetus to undertake a demonstration community action project centred on adolescent risk taking was both national statistics, demonstrating that injury is the leading cause of death for adolescents, and growing evidence suggesting that there is an relationship between risk taking behaviours and adverse health outcomes during adolescence. However, as has been demonstrated previously, national data are often insufficient to motivate communities to do anything about the problems facing their young people. To address this, local data were collected and disseminated.

Four local data sources were used: (i) 1989–94 public hospital discharge data relating to motor vehicle crashes, suicide attempts, and assaults; (ii) a risk taking questionnaire completed by all Riverdale students 16 years and over; (iii) 16 focus group discussions held with those who had left school; and (iv) 36 key informant interviews held with service providers.

Riverdale public hospital discharge data indicated that, for selected intentional and unintentional injuries, rates were comparable with the rest of New Zealand. Analysis of the questionnaire confirmed that adolescents in Riverdale were engaging in high levels of risk taking behaviour.

(3) ACAP: development and implementation
The developmental phase of this programme involved: formalising the programme structure; selection and training of two local programme coordinators; preparation of the risk taking profile; and dissemination of the findings. The implementation phase began with a community workshop facilitated by members of the two outside agencies. At this workshop, participants identified that risk taking behaviour associated with alcohol should be the focus of their activities. A group was established to implement the following strategies:

(a) Advocacy
- To support, on a local level, a ban on alcohol sponsorship of sport.
- To support stricter enforcement of under-age drinking laws.
- To promote and encourage organisations providing conflict resolution strategies.
- To promote a wide range of recreational and leisure activities that do not centre on the consumption of alcohol or the taking of drugs.
- To identify, provide information on, and actively promote, referral of “at risk” adolescents to appropriate agencies.

(b) Education
- Support for the reintroduction of the school curriculum programme “Students Against Drink-Driving”.
- Provide information to adolescents on the impact of alcohol and cannabis, and actively support initiatives to change the culture of their acceptance.
- Provide opportunities for adults to be made aware of the responsibilities they carry as role models, that is their need to better monitor their own drinking and drug use, as well as that of their own adolescent children.
- Provide extensive education for teachers at the local high school relating to the identification and referral of “at risk adolescents”.
- Support the testing of a curriculum based programme “Mental Health Matters” being developed by the MHF.

(c) Legal/Regulatory Change
- Support changes to the law concerning alcohol and sports promotion; in particular, to support an alcohol tax for sports sponsorship similar to that of tobacco.
- Support stricter regulations surrounding the consumption of alcohol on sporting premises.
- Support stricter penalties for those who serve underage drinkers.
- Support regulations to restrict the carrying of weapons by adolescents.

(d) Environmental Modification
- The provision of a multipurpose facility for adolescents.
- Support for the employment of a youth community worker.
- Support the employment of a specialist alcohol and drug counsellor.
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Work towards developing stronger networking links so that leisure/recreational resources are more widely used to support initiatives relating to environmental modification and education. For example, funding was provided for the employment of a specialist drug and alcohol counsellor for adolescents, premises were provided for a youth recreation centre, the curriculum based programme “Mental Health Matters” was tested at the local high school, teachers attended workshops to identify “at risk” adolescents, and the community had an opportunity to attend similar workshops. In addition, it was found that while the Maori community were not well represented in the development of the injury prevention strategies, representatives of this community were actively involved in this implementation.

(4) Evaluation
Formative evaluation is a means by which programme activities and progress are assessed. The primary aim of the formative evaluation was to develop strategies that would address adolescent risk taking and promote wellbeing. This was achieved through the provision of information relevant to programme development and implementation, and included: the adaptation of an effective community development model; acknowledging the restrictive nature of the time frame; reinforcing the value of interagency collaboration and the collaboration of community groups with outside agencies; identifying, obtaining, and presenting relevant information in a timely manner, conducting evaluation to assess impact of the ACAP; and highlighting issues that need to be addressed before the commencement of similar programmes in other communities. No attempt to determine effects on outcome was undertaken.

Providing effective ongoing formative evaluation input required maintaining a critical perspective on the programme, while working closely with those involved in planning and implementing it. The fact that the formative evaluator had an independent institutional base assisted in maintaining a critical perspective. In an activity such as the ACAP, where the intervention is in an emerging or development phase, a critical role for formative evaluation is to help community members identify goals and develop strategies for achieving them. The activities undertaken as part of this ACAP emerged largely through the discussion and planning process at community meetings. The role of the evaluator at these meetings was to bring research based substantive knowledge of adolescent risk taking and injury prevention to assist the discussions.

It is difficult to accurately assess the impact of this evaluation on eventual programme outcomes. Assessing changes in adolescent risk taking behaviours and attributing these to the ACAP is problematic. This community action programme was not designed in such a way, and did not operate in a context that would allow clear conclusions to be drawn about its effects. However, evaluation conducted six months after the community activation workshop indicated that work had progressed to varying degrees on many of the strategies, especially those related to environmental modification and education. For example, for additional information contact Dr Carolyn Coggan at the Injury Prevention Research Centre; phone +64 9 3737999 x 6348; fax +64 9 3737503; e-mail: c.coggan@auckland.ac.nz.

(5) Lessons learned
Interagency support was an important impetus for the development of this locally based initiative. The comprehensive approach adopted by the MHF and IPRC, involving the community in the development of its own prevention strategies, resulted in the implementation of many initiatives to address risk taking behaviour. A key component was the employment of two community organisers. They acted as catalysts, helping adolescent risk taking issues to have a higher profile, and by encouraging institutions at the local level to take a greater role in injury prevention. The community adolescent health profile, especially the results from the adolescent risk taking survey, was a pivotal mechanism for community activation as well as the support given to the MHF and the IPRC by the local high school.

Unfortunately, the time frame for this project was short. A community development project needs sufficient time for all cultural groups to become involved. Initially, the Maori community were not well represented, but at the evaluation six months after the project Maori support for, and active involvement in, the implementation of injury prevention strategies was evident.

The conduct of this ACAP provided valuable insights into the process of community activation. It illustrated how providing a community with information can act as a stimulus for the development of injury prevention initiatives. It also suggests that using a comprehensive approach focusing on risk taking behaviour rather than on isolated unintentional or intentional injury problems may be an appropriate way to address escalating adolescent injury rates.

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Children and personal watercraft: injury characteristics and potential countermeasures

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Every summer, families and children travel to the waterways to participate in recreational activities. One increasingly popular water activity for children is riding on, or operating, personal watercraft (PWC). When these were first produced in the 1970s, they were one seat water vessels with a maximum of 40 horsepower engines. Today, many manufacturers are producing vessels with three seats, horsepower over 120–135, able to reach top speeds of 65–70 miles per hour. Although there are many variations, the most popular is known in America as a Sea-Doo.

As one PWC dealer stated, “You would have to spend at least $35 000 to $40 000 for a boat to go that fast. Personal watercraft is a cheap way to go fast”. Clearly, PWCs are getting bigger and faster and manufacturers appear to be targeting younger populations through sophisticated media advertisements, splashy designs, and appealing to the inherent “fun” of PWC use.

In response to the possible dangers from their use by people 18 years and under, many states in the US have passed regulations governing their operation. But questions remain: how safe are PWCs? Are these countermeasures enough? Are those under 19 at greater risk for injury as operators or passengers than older users? Another concern is for the safety of other users of the waterways.

Indications are that injuries, disabilities, and fatalities are increasing as the popularity of these boats grows. Injuries from PWC related crashes in the US have more than doubled from 1990–94. Those to operators under 20 years of age have increased by 50% during the same time (these percentages do not include passengers). The magnitude of this public health problem, and research to prevent PWC related injuries, has not been adequately addressed. This may be due to the relatively recent emergence of the PWC as a popular watercraft or to the lack of detailed information or surveillance of incidents involving PWCs.

This paper describes childhood use and injury risk associated with PWCs in Arkansas, the availability and accuracy of injury data, and suggests areas for improved surveillance and countermeasures.

Methods

To document the use and describe injuries associated with PWCs, boating accident reports provided by the Arkansas State Game and Fish Commission from 1994 through July 1996 were collected. By state law, all boating accidents involving a fatality or $100 or more in personal property damage must be reported to the commission. These reports are collected by boating accident investigators certified through the US Coast Guard. Before 1994, the reporting of such accidents was the sole responsibility of the individuals involved and it was likely the data were inconsistent and unreliable. Therefore, researchers did not compile reports collected before this date.

Results

Over a 30 month period, Arkansas waterways recorded 82 wrecks, 57 injuries, and four deaths involving PWC. In most cases the operator was responsible for the event. Operators under the age of 18 were involved in 43% (35) (mean age 14 years), less than 20 hours of experience (69%), and most had no prior boating education class (98%). Most passengers were also under the age of 18 (70%). About half of all reported injuries occurred to those under the age of 19 (48%). The youngest fatality was an 18 year old who drowned after being thrown from a PWC.

Of the 27 injuries to those under 19, four included the head and neck, four involved a lower extremity, and one an upper extremity; the body part was not specified in the remaining 18. Specific types of injury included fractures (19%), lacerations (11%) , abrasions (4%), sprain (4%), drowning (4%). Of the injured, 19 (70%) were operators.

The most frequently cited causes for incidents involving operators under 19 were inexperience (50%), inattention (28%), and negligent operation (10%). Alcohol was not noted as a factor in any report. Most events involved collisions between two vessels (77%),...
with one out of five between two PWC. A majority occurred between June and July (75%), on weekends (65%), and between 2 pm and 6 pm (57%).

Less than half of the victims under 19 reported they were swimmers (44%), but most stated they were wearing a personal flotation device (94%).

**Discussion**

This study has several limitations. The reliability of the data is uncertain due to the dependence on the accident investigator to record accurate, detailed information. Information to determine injury type, severity, and etiology is not required on the investigation form and therefore is minimal and inconsistent. Additionally, no data now exist that could provide information on the number of registered PWC in Arkansas. This would assist in determining mortality, incidence, prevalence, and risks.

However, even the limited results indicate clearly that PWC are involved in injury related crashes, and that children and young adults are a priority for prevention. Unfortunately, due to the PWC image as a toy, and the marketing tactics of manufacturers, children may be at higher risk for riding, operating, and therefore, for injury. As PWCs increase in use, size, speed, and there are more children operators, several strategies for prevention of injuries should be considered. Priority areas for possible countermeasures based on the findings of the study, are education, legislation or policy, and manufacturing, engineering, or design modifications.

**EDUCATION**

A large percentage of events arose from inexperience or inattention. Only one child had received any boating education. In the US, only 16 states require boating education and only 10 require special training for the operation of a PWC. The PWC is much different in handling, maneuvering, and other characteristics, than other boats. Mandatory PWC education and training programs for beginning operators could increase these skills and an appreciation for the responsibilities included in operating these boats.

**LEGISLATION**

At present, 43 states have age restrictions limiting PWC operators, but these vary from 10 to 16 years of age. Another six states require licensure for operation. Other regulations target speeding, restrictions on areas of PWC use, and boating environment policies. With regard to personal protection devices, most states require their use, but no state currently has laws pertaining to helmets. Due to the risk for head injury, helmets during PWC use should be considered.

**MANUFACTURING AND DESIGN**

As with any injury intervention, all this may not be enough. Just as with other products that have potential for injury, PWC manufacturers must take responsibility for developing safer vessels. In general, PWC are considered more safe than other outboard motorboats because their inboard propeller driven design decreases the risk for limb injury. But this is only one example of engineering design changes or modifications that could increase safety. Even though a majority of the wrecks on Arkansas waterways were attributed to human error, designing safer PWCs could limit those errors.

Enacting policies that limit age of PWC operation, mandating education and possibly licensure, and manufacturing design changes, are important countermeasures to consider.

These results are a call for injury professionals and researchers to (1) become more aware of PWC injuries in their communities; (2) enact better surveillance systems for characterizing the etiology of these events; (3) advocate for passage of age restrictions, education, and safe boating environment legislation; and, (4) require manufacturers to produce safer vessels by investing in the design of PWC that ensure safety as well as fun. Any interventions that have as their goal reducing injuries from PWC use should be evaluated for their effectiveness to determine the most appropriate strategies.

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Southern Africa (and beyond) report

I am constantly aware that most of my reports selfishly concentrate on happenings in Southern Africa. Occasionally, I am able to glean the odd item on what is happening further north from news reports, what little there is on the internet, or from that outstanding monthly, “BBC Africa”. Rather than bore readers with poor excuses for this imbalance, I may rather reconfirm that I would welcome news (in any form whatsoever) related to childhood injury in Africa, and inclusion of which would allow this column to become more representative of the entire continent than it currently is. Those who are kind enough to submit news items will be person-ally acknowledged.

Having got that off my chest, I am thrilled to report on a fresh and exciting injury prevention campaign that has been hatched in Uganda, thanks to both support and input of IPAC, afrousional agency. I am extremely grateful to Dr Olive Kobusingye, Director of the Injury Control Centre based at Makerere Medical School in Kampala, for providing me with the following information:

“Representatives from Ethiopia, Kenya, Uganda, Zambia, Zimbabwe, South Africa, and the World Health Organization (WHO) met on December 15–17 in Entebbe, Uganda at the joint WHO/Injury Control Centre Uganda (ICC-U)–IPAC Global Working Group Meeting on Injury Prevention and Control in East and Southern Africa. Participants focused on the health sector issues of injury surveillance emergency medical systems, and health professional training in injury epidemiology and trauma care. A set of recommendations was formulated which has the potential to be a milestone for injury prevention in Africa. The adoption of a standardized minimum data set for hospital based injury surveillance was discussed. A trauma registry form tested and used by the ICC-U will be presented to injury control workers in participating coun-tries for the development of a common format; it is hoped that this data set will form the core of a trauma registry system in these countries. The single page trauma registry form includes ICD-9 categories of injury, a severity instrument (the Kampala score), victim and event information, and in-terpretation. Operate definitions for the registry have been written, and the form has already been tested in Uganda and Ethiopia. The trauma registry form is sufficient for base line injury measurements while at the same time keeping the form short and simple enough for a range of health workers to fill out”.

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Editor’s note: While most Regional Reports have come from regular contributors—our team of Regional Editors—I am always delighted to receive contributions, regular or otherwise, from others, especially from parts of the world where we do not have Editorial Board members. Please send your contribu-tions to the editor, Barry Pless.

Pedestrian and bicyclist safety in New York City

Pedestrian and bicyclist safety in New York City (NYC) has been in the news lately. Mayor Rudolph Giuliani has raised the ire of NYC residents by increasing the fine for jaywalking from $2 to $30, plus making a court appear-ance mandatory for paying fines for this offense. In addition, the mayor has recently announced that pedestrian barriers which separate pedestrians and vehicles at certain intersections will be kept up “indefinitely”. Anyone who has walked or driven the streets of New York know that its pedestrians are among the most aggressive in the world. The scene from the Midnight Cowboy in which Dustin Hoffman screams to an incensed driver, “I’m walking here, not running,” is the attitude of the New York pedestrian, but only a little.

Pedestrian and bicyclist injuries are a serious and sizeable problem in NYC city. There was a 23% increase in the number of pedestrians and bicyclists killed in motor vehicle crashes in NYC last year, from 249 in 1996 to 302 according to preliminary police statistics for 1997, 3700 hospitalizations annually, and an estimated 10,000 pedestrians struck by motor vehicles but not hospitalized. Between 1994 and 1996 pedestrian deaths due to motor vehi-ciles declined slightly from 223 to 213. In this same period motor vehicle occupant deaths decreased more substantially from 207 to 169. Despite the preponderance of pedestrian and bicyclist deaths, a study by Transportation Alternatives, a NYC watchdog group, found that most of the $400 million of New York State and NYC funds earmarked for trans-portation safety in the next five years will go to improve the safety of vehicle occupants rather than the safety of pedestrians and bicyclists.

From a public health perspective, enforce-ment of laws as well as use of physical barriers to separate pedestrians and vehicles are perfectly respectable counter measures against pedestrian injuries. Some of the uproar is because the least lethal players in the urban drama, the pedestrians and bicyclists, feel they are being unfairly and illogically singled out. And, of course, other measures could and should be taken, including enforcement of speed limits, use of speed bumps, creation of walking streets in heavily congested areas, and stricter licensing of taxi drivers. But the public ridicule that has been heaped on the Mayor is a reminder of the critical role played by the social context in which environmental and behavioral interventions are launched.

Safetystategies

In February 1998, the British government published two green papers (consultative policy statements) for England and Scotland: Our Healthier Nation and Working Together for a Healthier Scotland. These outline a strategic approach to public health that build on earlier target setting exercises that have met with limited success. The green papers are especially noteworthy in that the New Labour administration explicitly recognises the strong association between poverty and poor health and the need to tackle the former (as well as lifestyle and behaviour) in the context of a comprehen-sive health promotion strategy.

For England, 12 year targets will be set to reduce mortality and morbidity in four prior-ity areas: heart disease and stroke, accidents, cancer, and mental health (suicide). Targets do not feature prominently (although they are not ruled out) in the Scottish paper which, in addition to the above four areas, flags up a number of others, particularly teenage preg-nancy and dental health.

The green papers have been broadly welcomed by public health professionals. Disappointment has been expressed however on two main counts. First, no targets have been set to monitor progress towards reduc-ing the widening socioeconomic inequalities in health in the UK. Second, the proposed action seems weak on specific, sustained, and adequately resourced measures designed to make a major impact on the underlying social, environmental, and cultural causes of ill health. Moreover, while the poorer health (including injury) record of the Scots is acknowledged, this is not backed up by a commitment to mount a proportionately more vigorous health improvement pro-gamme north of the border.

For injury prevention professionals, the statements are a mixed blessing. On the posi-tive side, “accidents” have held their place as priority areas in both England and Scotland. Unfortunately, the writers of the green papers have clung to an outdated and discredited terminology, have offered virtually no new ideas to address the injury problem, and have proposed targets that are likely to be met in the absence of any further policy initiatives whatsoever. Cynics might argue that therein lies the huge political appeal of the target setting exercise!

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LETTERS TO THE EDITOR

Safety strategies

EDITOR,—Jan Shield is to be commended for rallying the troops in favour of “active” safety strategies, and most of her arguments in favour of education and enforcement would undoubtedly be valid in a developed country. However I would like to offer two contrasting viewpoints on the subject which are based primarily on personal observations related to the challenges of traffic safety confronting us in a cash strapped, developing country.

Firstly, in support of passive measures is the increasing strain placed on the human and financial resources essential to conceive and sustain education programmes and law enforcement, particularly in developing countries. At such, traffic calming measures are likely to be more effective than nothing—simply because there is no affordable solution to undisciplined traffic flow on a
Challenge of drowning prevention in low and middle income countries

EDITOR,—We read the editorial on “The challenge of drowning prevention” with great interest. There is no doubt that drowning is a major but under recognised cause of premature loss of life and disability. This has been borne out by the Global Burden of Disease Study which highlights the scale of the problem, by region and by age and sex characteristics. It is worth examining their findings further.

At a worldwide level, Murray and Lopez estimated that drowning was responsible for about half a million deaths in 1990 and ranked 20th in terms of leading cause of mortality, after road traffic accidents (9th), self inflicted injuries (12th), and violence (17th) as the other injury related causes. Mortality rates from drowning were highest for children under 5 in China, followed by countries belonging to the “other Asia and islands” region, and sub-Saharan Africa, with the lowest rates in the “established market economies”. In this region, the mortality rate ratio between China and the EME was 13:1 in boys and 22:1 in girls.

The large degree of variation between the different regions in the study must be an even greater variation, both between and within countries, given the different geography and populations. There is great diversity in the circumstances in which drowning occurs in these different areas. Whereas swimming pools, sailing, and water sports may be priority areas in the EME, in low income countries attention must be paid to drowning in streams, wells, dams, cisterns, and while fishing. Clearly there are a huge range of different environmental and behavioural circumstances. The obvious intervention to keep the child who cannot swim away from water must have a different interpretation in the different regions. Although swimming pools could be fenced in EME countries, the fencing of waterways would be impractical in countries where this runs into thousands of kilometres. This is not to say that there are no common approaches. As the editorial rightly points out, education about drowning, and supervision, and training in resuscitation are important first steps which could be applied globally. Researchers also need to study the circumstances under which drowning occurs and the first aid and health care response, within countries and cross nationally. Data on good practice need to be collated so that appropriate interventions which are transferable to other low and middle income countries can be easily identified. Whatever the intervention, there is an urgent need to get drowning higher on the agenda for policy makers and researchers.


In Target Risk, Professor Gerald Wilde of Queen’s University in Ontario, Canada assembles an impressive body of theory and evidence to support a provocative conclusion: the only effective strategy for achieving substantial and durable reductions in the rate of drowning in a population is to increase people’s desire to be safe and healthy. Traditional measures of injury prevention—engineering, education, and enforcement—are doomed to failure because they do not alter the “target levels of risk” that govern risk taking behaviors. The process of “risk homeostasis” will ultimately undermine all non-mandatory countermeasures, since people will alter behaviors to achieve an equilibrium between the overall amount of risk they perceive and their overall desired level of risk. The key to success, Wilde argues, is “expectationism”: promoting people’s interest in their future wellbeing in order to motivate adoption of smaller risk targets.
Wilde is not arguing that people enjoy or seek risk of injury. Like behavioral decision analysts and economists, he postulates that people select or accept risk targets in order to achieve other desired ends in life. When safer highways are built, drivers trade some or all of the extra safety for faster travel speeds and more relaxation (and inattention) in driving. When road conditions deteriorate (due to ice or fog), people sense elevation in risk and respond by slowing down and driving with more caution. Using variations on this adaptation theme, Wilde challenges the effectiveness of most mainstream injury prevention measures: seat belt laws, antilock brakes, traffic lights, driver training/education, crackdowns on speeding, increased police presence, and more. He argues that increased safety (for example, in incentive programs) and decreased risk (for example, in police enforcement action) for highway traffic use, helmet laws, and motorcycle helmet laws, name it! Even more provocatively, Wilde hints that any long term progress that might be made in fatal injury could be offset by increases in the risk of fatal diseases (since people's overall risk target is maintained).

Technical specialists will certainly find fault with Professor Wilde's handling of a variety of technical empirical questions. For example, I thought his discussion of the association between the business cycle and injury frequencies was fair and insightful, yet his assessment of the effectiveness of safety belts is highly selective, one-sided, and arguably deceptive. Professor Wilde also has a tendency to see risk homeostatic explanations behind all empirical anomalies. Again, on safety belt use laws, Wilde notes that if belts are 50% effective in saving lives, and if belt use rates increased 50 percentage points following laws, why didn't laws cause an immediate 25% decline in occupant fatality counts? (Wilde is correct that few jurisdictions have experienced 25% reductions in fatalities after belt laws.) Aha, Wilde asserts, maybe drivers offset the benefit of the safety belts by taking more risks. Some alternative explanations that Wilde ignores are (a) the myopia effect (drivers for example, drunk and young males) may be least likely to comply with the law, (b) the 50% increase in use is an exaggeration, and even (c) the 50% effectiveness number may be biased upward (we now think belts might be 60–90% effective).

Yet I would urge specialists to overlook Wilde's handling of detailed technical matters because such focus can cause the reader to shortchange Wilde's overall message. It is a message that the field of injury prevention needs to hear. We spend remarkably little effort on bottom-up approaches to motivating safety (for example, incentives) and inordinate resources on top-down measures aimed at protecting people from their folly (for example, helmet laws and speeding controls). A deeper understanding of the motivational barriers experienced by frustrated injury prevention measures is critical to the advancement of our field. Professor Wilde makes a lasting contribution by shedding some light on this neglected area.

This book has a length of 234 pages. It is comprehensive in topic coverage. The topics are as follows: the concept of homeostasis, compact theory of risk taking, theory of risk homeostasis, and deductions and data, intervention by education, remedy by engineering, enforcement action, risk homeostasis in the laboratory, individual differences, and motivating for safety and health.

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