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Linda L Dahlberg a & Alexander Butchart b

a The Division of Violence Prevention, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, Mailstop K-68, 4770 Buford Highway, NE, Atlanta, GA, 30341, USA
b The Department of Injuries and Violence Prevention, World Health Organization, Geneva, Switzerland

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State of the science: violence prevention efforts in developing and developed countries

LINDA L. DAHLBERG†* and ALEXANDER BUTCHART‡

†The Division of Violence Prevention, National Center for Injury Prevention and Control, Mailstop K-68, Centers for Disease Control and Prevention, 4770 Buford Highway, NE, Atlanta, GA 30341, USA
‡The Department of Injuries and Violence Prevention, World Health Organization, Geneva, Switzerland

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Violence is an important global public health problem that claims the lives of over 1.6 million people each year and results in numerous other health and social consequences. It is also a preventable health problem. This paper provides an overview of the current status of prevention efforts in developing and developed countries, describes what is known about the effectiveness of different approaches and highlights some of the important challenges in building the evidence-base for violence prevention programmes. Research conducted to date shows an imbalance in the emphasis of prevention programmes across the different types of violence. This imbalance is reflected in the timing of response, the nature and level of influence of interventions and programmes and the outcomes studied. Promising and effective approaches have been identified, but many more still require rigorous testing, particularly in developing countries. The current state of the science in violence prevention reveals both progress and a number of remaining challenges.

Keywords: Violence; Abuse; Prevention; Intervention studies; Developing countries

1. Introduction

National and cross-national data indicate that violence is an important public health problem throughout the world. Over 1.6 million people lose their lives to acts of violence each year (Dahlberg, and Krug 2002). Nearly half of these deaths are suicides, almost one-third are homicides and about one-fifth are war-related. In all parts of the world, deaths represent only the ‘tip of the iceberg’. For everyone who dies as a result of violence, many more are victims of non-fatal violence and suffer from a range of physical, sexual, reproductive and mental health problems (Krug et al. 2002). Violence also places a massive burden on economies, costing billions in US dollars each year in health care, legal costs, absenteeism from work, lost productivity and strains on economic development (Waters et al. 2004).

Violence is often seen as an inevitable part of the human condition – a fact of life to respond to, rather than to prevent. The World Report on Violence and Health challenged the notion that acts of violence are simply matters of family privacy, individual choice or inevitable facets of life (Krug et al. 2002). Rather, violence can be predicted and is a preventable health problem. Making the case that violence is a preventable health problem rests, in part, on demonstrating that violence prevention programmes work.

The purpose of this paper is threefold: 1) to provide an overview of the current status of prevention efforts; 2) to briefly describe the more common types of prevention...
approaches being used to reduce violence and what is presently known about their effectiveness; and 3) to highlight some of the important challenges in building the evidence-base for violence prevention programmes and using it to strengthen the field.

2. Current status of prevention efforts

To advance violence prevention efforts in both developing and developed countries, it is important to have a sense of where the field of violence prevention is now. This can be accomplished by examining the emphasis of prevention programmes in terms of: 1) the timing of response (i.e. before violence occurs, immediately afterwards or over the longer-term); 2) their level of influence (i.e. whether they are designed to change individual behaviour directly or the factors, conditions and systems that influence behaviour); and 3) the outcomes typically examined in evaluations of programmes.

2.1. Timing of response

Public health interventions are traditionally characterized in terms of three levels of prevention: primary prevention approaches, which aim to prevent violence before it occurs; secondary prevention approaches, which focus on the more immediate responses to violence, such as pre-hospital care, emergency services or treatment immediately following a rape or an injury sustained as a result of violence; and tertiary prevention approaches, which focus on long-term care in the wake of violence, such as rehabilitation and reintegration, attempts to lessen trauma or reduce the long-term disability associated with violence (Dahlberg, and Krug 2002). While these levels of prevention have traditionally been applied to victims of violence and within health care settings, they are also relevant to perpetrators and have been used to characterize judicial responses.

When one examines where the emphasis of prevention programmes has been placed in terms of the timing of response, there are some differences by type of violence (figure 1). In youth violence, the majority of efforts have focused on primary prevention. There have been programmes for youth already involved in violent and delinquent behaviour (Lipsey and Wilson 1998, Henggeler et al. 2002) and initiatives aimed at ‘getting tough on crime’ (e.g. boot camps, shock incarceration programmes and trying and sentencing youth in adult courts for serious offences) (Howell et al. 1995, Feld 1998) but, on balance, there have been many more prevention efforts aimed at curbing violent behaviour before it occurs (Hawkins et al. 1998, Howell and Hawkins 1998, Mihalic et al. 2001, Mercy et al. 2002). There has also been a growing emphasis on early intervention in childhood as a way of disrupting or changing the developmental trajectories of violence (Thorn-}


With intimate partner violence, sexual violence, child maltreatment and elderly abuse, the majority of efforts have been focused on secondary/tertiary prevention – that is, identifying victims and providing the necessary care and services to prevent re-victimization (Wasik and Roberts 1994, Finkelhor and Berliner 1995, Leinman et al. 1998, Groves 1999, Kelly and Humphreys 2000, Heise and Garcia-Moreno 2002, Jewkes et al. 2002, Runyan et al. 2002, Wolf et al. 2002). There have been primary prevention efforts in schools and communities and efforts aimed at parents and caregivers (Olds et al. 1986, 1997, Ellsberg et al. 1997, MacIntyre and Carr 1999, Foshee et al. 2000) but, on balance, there have been more efforts aimed at providing care and services. Given the relatively long history of public health-oriented work on these types of violence, it is not immediately clear why this emphasis on secondary/tertiary prevention continues to persist. Among the reasons given by some decision-makers is the argument that the opportunity costs of primary prevention, which can take years to show effects at the population level, represent too great a political risk over investment in interventions judged more likely to ensure popular support, such as arrest or incarceration. Another reason given is that diverting resources away from services and treatment will weaken hard-won gains in these areas for vulnerable groups such as women and children.

Shifting the balance toward more primary prevention efforts requires a stronger body of research about the effectiveness of these types of effort, including their cost-effectiveness, to show that positive benefits are possible even in the short term and that such efforts are more cost-effective than other alternatives. It is also important to address the concerns of stakeholders in victim services that investing in primary prevention will be at the expense of services and care. As stated in the World Report, it is important to strengthen responses for victims of violence and to make sure that offenders are punished, but there is also a tremendous need, especially in the areas of partner violence, sexual violence and family violence, to develop and test programmes aimed at preventing violence from happening in the first place.

2.2. Level of influence

Another way of looking at violence prevention programmes is by their level of influence. The ecological model was used in the World Report to illustrate the complex and multifaceted nature of violence (Dahlberg, and Krug 2002). Violence has its roots in the interaction of many factors – biological, social, cultural, economic and political. Each level in the ecological model can be thought of as a level of influence and also as a key point for
intervention (figure 2). That is, individual behaviour can be modified directly; it can be modified by influencing the close, interpersonal relationships of people and their family environments; it can be changed by modifying the settings people move through – for example, schools, workplaces or neighbourhoods; and it can be modified by making more societal, system-wide changes to improve, for example, educational or economic opportunities or change cultural norms (Tolan and Guerra 1994).

When one examines the emphasis of prevention programmes by their level of influence, it is apparent across the different types of violence that there is an imbalance in the focus of prevention programmes. There have been far more efforts aimed at changing individual and relationship factors than there have been at changing community or societal factors (figure 1) (Krug et al. 2002). In other words, more emphasis has been placed on changing individual attitudes, beliefs and behaviours than on the factors or systems that create the conditions for violence to occur. Given that violence is the result of the interplay between context and person, it is vital that prevention efforts focus on both.

One reason for the imbalance is that it is easier to design and evaluate individual and relationship or family-based programmes. Both types of programme are also less costly to implement than programmes or interventions to reduce community and societal risk factors. Government officials and other decision-makers may also be unaware of how social or economic policy, housing configurations, social capital or even the provision of high-quality pre-primary, primary and secondary education are specifically related to rates of violence. The need for evidence-based interventions

![Figure 1. Emphasis of prevention programmes. IPV = intimate partner violence; SV = sexual violence; CM = child maltreatment; EA = elderly abuse.](image-url)
that address community and societal factors is relevant to low-income communities everywhere, but it is particularly important to developing countries where levels of societal and community risk (such as economic, social and gender inequalities, drug distribution networks and concentrations of poverty) tend to be greater than in developed countries.

2.3. Outcomes studied

Outcomes are also very important in prevention efforts. There are a variety of outcomes that can be studied in prevention efforts, from changes in knowledge and attitudes to changes in behaviour and reductions in injuries or deaths. Other outcomes, such as more proximal outcomes related to the mediators or moderators of violence, or other health consequences linked to violence, such as depression, post-traumatic stress disorder, eating disorders, risk-taking behaviours (Felitti et al. 1998, Dietz et al. 1999, Hillis et al. 2000), can also be considered. In terms of the outcomes generally studied in evaluations of interventions and programmes, there have been more efforts across the different types of violence geared toward changing knowledge and attitudes than behaviour (figure 1). Behaviour change is an important outcome and should be an important goal of prevention efforts.

Smaller-scale research efforts have also generally not included injuries and deaths. One reason is that these are more rare outcomes and it is difficult to see a significant change in these outcomes with a smaller-scale prevention trial. Another reason is that they are not always the primary outcome for certain types of violence or necessarily the most appropriate outcome to study in certain types of prevention programmes. In many countries, there is also the issue of available data, especially at the community-level where injury surveillance and other information systems are generally lacking. The absence of such systems makes it more difficult to monitor the effects of prevention efforts on violence, including even the more severe forms of violent injuries, such as gunshot or stabbing wounds or blunt force trauma.

3. What works? Determining effective responses

From the perspective of public health, a fundamental question is: ‘Do violence prevention programmes work?’ That is, ‘are there certain interventions, programmes or strategies that are effective in preventing or reducing violence?’ To answer that question, it is important to begin with the term ‘effective’. What is meant by effective? Testimonials about a programme provide some insights into how a programme is running and whether or not participants find it worthwhile, but testimonials are insufficient when it comes to knowing whether or not the programme is producing change in behaviour or in the factors that mediate or moderate violence.

Various criteria for effectiveness have been proposed (Mihalic et al. 2001, US Department of Health and Human Services 2001). The most stringent include: an evaluation of a programme using a strong research design, either experimental or quasi-experimental; evidence of a significant preventive effect; evidence of sustained effects (that is, they are maintained beyond treatment or participation in the programme); and replication of the programme with demonstrated preventive effects. As one might expect, few
programmes meet all of these criteria. In the discussion that follows, the term ‘effective’ will be used for programmes that have been evaluated with a strong research design and have evidence of a preventive effect; ‘promising’ will be used for programmes that have been evaluated with a strong design and have some evidence of a preventive effect, but require more testing; and ‘unclear’ will be used for programmes that have either been poorly evaluated or remain largely untested.

One useful way to think about the evidence and review what is currently known about the effectiveness of different interventions is to consider it according to the different levels of influence in the ecological model: individual; relationship; community; and societal.

3.1. Individual-level interventions

Individual-level interventions are designed to change an individual’s attitudes, beliefs and behaviours directly and can be delivered in any setting. Some of the more common primary prevention approaches at this level include pre-school enrichment programmes, social development programmes, life-skills training and programmes designed to prevent unintended pregnancies and to get women to seek adequate prenatal and postnatal care. The latter types of approach, for instance, are believed to be key in ensuring better birth outcomes and reducing the risk for child maltreatment and the early developmental risk factors for youth violence (Williams et al. 1997). There are also a number of secondary/tertiary prevention approaches that focus on individual-level change, such as counselling/therapeutic approaches, training police, health care providers and employers to make them better able to identify and respond to the different types of violence and programmes for batterers/perpetrators.

The evidence for the effectiveness of individual-level approaches varies by type of approach (table 1). Pre-school enrichment programmes are designed to strengthen bonds to school and to introduce children early on to the social and behavioural skills necessary for success in school (Yoshikawa 1995). A few long-term follow-up studies of such programmes have found positive benefits, including less involvement in violent and other delinquent behaviours (Berrueta-Clement et al. 1984, Johnson and Walker 1987, Schweinhart et al. 1993). Social development and life-skills training programmes, which are designed to build social, emotional, cognitive and behavioural competencies, have been more widely evaluated and appear to be an effective strategy for reducing youth violence (Hawkins et al. 1992, Farrell and Meyer 1997, Grossman et al. 1997, Samples and Aber 1998, Thornton et al. 2000, Farrell et al. 2001). Such programmes have also yielded positive results for dating violence (Jaffe et al. 1992, Foshee et al. 2000, 2004, Wolfe et al. 2003). Programmes designed to prevent unintended pregnancies and to get women to seek adequate prenatal and postnatal care, on the other hand, have not been adequately evaluated, particularly in terms of reducing child maltreatment and the early developmental risk factors for youth violence.

The evidence for counselling and therapeutic approaches is mixed and depends in part on the type of violence addressed. Psychotherapy, as a stand-alone strategy, is not effective for reducing serious youth violence (Tolan and Guerra 1994). More benefits have been reported when it is combined with social skills training and other educational-vocational services (Lipsey and Wilson 1998).

### Table 1: Evidence of effectiveness for individual and relationship approaches across types of violence

<table>
<thead>
<tr>
<th>Ecological Context</th>
<th>Intervention</th>
<th>Promising¹</th>
<th>Effective²</th>
<th>Unclear³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>Preventing unintended pregnancies</td>
<td></td>
<td>?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prenatal/postnatal care</td>
<td></td>
<td>?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Preschool enrichment programmes</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social development/life-skills training programmes</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Counseling/therapeutic approaches</td>
<td>+ / –</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Training for police, health care providers, employers</td>
<td>+ / –</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Perpetrator programmes</td>
<td>+ / –</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship</td>
<td>Home visitation</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parenting programmes</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Family therapy</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intensive family preservation services</td>
<td>+</td>
<td></td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>Mentoring</td>
<td>+ / –</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Peer mediation/counseling</td>
<td>–</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Peer group norms</td>
<td>–</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gang prevention programmes</td>
<td>–</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹Promising: evaluated with a strong design and some evidence of a preventive effect (+), but requires more testing
²Effective: evaluated with a strong design and evidence of a preventive effect (+), demonstrated to be ineffective (–), or evidence is mixed (+ / –).
³Unclear: either poorly evaluated or untested.
other types of violence, there is some evidence that cognitive-behavioural therapy administered shortly after a sexual assault can hasten the rate of improvement and lessen trauma (Foa et al. 1995, Foa and Street 2001), and evidence that it may be an effective approach in reducing suicide attempts (Salkovskis et al. 1990, Linehan et al. 1993, MacLeod et al. 1998).

Training police has proved largely ineffective in changing police behaviour, primarily because it has not always been accompanied by or reinforced with efforts to change attitudes and organizational culture (Heise and Garcia-Moreno 2002). In terms of health care providers, training has led to changes in knowledge and awareness in the short term, but these changes have not always translated into behavioural change or changes in practice (Friedman et al. 1992, Sanders 1992, Fawcett et al. 1998, Sugg et al. 1999). There has been too little evaluation of programmes for employers to know whether or not training is a viable approach.

Programmes for men who physically and sexually abuse their partners have helped some men modify their behaviour (Edleson 1995, Gondolf and Jones 2001, Jones et al. 2004), but there is generally a very high drop-out rate and many who are referred to these programmes never complete them (Gondolf 1997, Mullender and Burton 2000). A recent review of these types of programme concluded that they work best when they continue for longer rather than shorter periods; change men’s attitudes enough for them to discuss their behaviour; sustain participation and work in tandem with a criminal justice system that acts strictly when there are breaches of the conditions of the programme (Mullender and Burton 2000).

### 3.2. Relationship-level interventions

Relationship-level interventions focus on changing behaviour by influencing close, interpersonal relationships and proximal environments, such as the family environment (table 1). The evidence for home visitation and for programmes that focus on family relationships and functioning, particularly on family management, problem-solving and parenting practices, is among the best evidence for reducing child maltreatment and other negative outcomes, including youth violence (Olds et al. 1986, 1997, 1998, Henggeler et al. 1998, 2002, Thornton et al. 2000, Olds 2002, Hahn et al. 2003a). The most successful programmes address both the internal dynamics of the family and the family’s capacity for dealing with external demands. The earlier these programmes are delivered in the child’s life, the greater the benefits (Yoshikawa 1995), although significant benefits have also been demonstrated when delivered to high-risk populations (e.g. youths who have already been arrested for violent or delinquent behaviour) during adolescence (Lipsey and Wilson 1998).

Programmes that simply provide parents with information, however, are not effective. Programmes that focus primarily on services are also limited. In the case of child maltreatment, for instance, evaluations of intensive family preservation services (which are geared toward keeping the family together and providing intensive services over a short period of time) are inconclusive, mainly because these programmes offer a large variety of services (making it difficult to know which are effective) and relatively few studies have included a control group (MacLeod and Nelson 2000, Runyan et al. 2002).

A warm and supportive relationship with a positive adult role model is thought to be a protective factor for youth violence and there have been some well-designed studies to suggest that this is the case (Grossman and Tierney 1998, Thornton et al. 2000, DuBois et al. 2002). However, there is considerable variability with regard to mentoring programmes, and participation by both the mentors and the youth can be uneven. Negative effects have been reported, particularly where there has been little training and where there have been breakdowns in the relationships with mentors (Grossman and Rhodes 2002).

Apart from mentoring relationships, there have also been a number of interventions that focus on relationships between peers, including those that are designed to change the nature of peer interactions, peer-group norms or redirect peer-group activities. The latter, for example, have been tried with gangs. There is little evidence to date that these types of approach are effective in reducing violent behaviour, particularly as single component programmes (Tolan and Guerra 1994, Kellermann et al. 1998). Some have also led to iatrogenic effects (i.e. unintended consequences or increases in violent behaviour). One of the failed ingredients in these types of approach is the mixing of high-risk youth together, which has had the unintended consequence of increasing cohesiveness and facilitating delinquency (Dishion et al. 1999, Poulin et al. 2001).

### 3.3. Community-level interventions

Community-level interventions focus on modifying the characteristics of settings that promote violent behaviour or create the conditions for violence to occur (table 2). Interventions at this level also focus on changes within institutional environments. There has been, for example, a number of efforts aimed at improving school settings, with policies and programmes that are designed to promote a pro-social, non-sexually and physically violent environment in classrooms and throughout the school. Attention has been paid to classroom management practices, promotion of cooperative learning techniques, teacher/staffing practices, student monitoring and supervision, changes to the physical environment and efforts to increase student engagement, reduce bullying and involve parents/care-
givers. Efforts to improve workplace, residential and primary care environments have primarily focused on implementing appropriate policies, guidelines and protocols for identifying and managing abuse.

The evidence to date suggests that environmental change programmes within school settings are promising (Olweus 1994, Cook et al. 2000, Flannery et al. 2003). Some have been evaluated with rigorous designs and have evidence of a preventive effect, although too few programmes have been examined in terms of sustained effects. The evidence-base for other settings, however, is less developed. Active screening for abuse – whether for intimate partner violence, sexual violence, child maltreatment or elderly abuse – is generally considered good practice (Friedman et al. 1992, Lachs and Pillemer 1995, Van Haeringen et al. 1998, Kim 1999, Vulliamy and Sullivan 2000). Unfortunately, little systematic evaluation has been carried out on whether screening for abuse can minimize consequences, improve safety and health-seeking behaviour or other outcomes – and, if it does, under what conditions. (Heise and Garcia-Moreno 2002, Runyan et al. 2002) Efforts to improve workplace, residential and primary care environments have also not been rigorously and systematically evaluated.

More has been done along the lines of changing community attitudes, beliefs and norms surrounding violence with the use of public information or prevention campaigns. Multi-component prevention campaigns have been launched to address gang violence, bullying, child maltreatment, domestic and sexual violence (Njovana and Watts 1996, Ellsberg et al. 1997, Hoefnagels and Mudde 2000, Mehrotra et al. 2000, Soul City Institute for Health and Development Communications 2000, Health Resources and Services Administration 2004). In general, these types of campaign have increased knowledge and awareness, as well as shifts in social norms concerning domestic violence and gender relations and some have led to increases in disclosure of child abuse and sexual offending (Hoefnagels and Baartman 1997), but they have not consistently led to changes in behaviour or reductions in violence.

There are a number of other types of community-level interventions, some focusing on community organizing, coordination of services, proactive policing, increased cohesion among community residents and others focused on the density of housing and the availability of alcohol. Most have either been poorly evaluated or remain largely untested. Community coalitions, coordinating councils or interagency forums, for example, have been used to monitor and improve responses to intimate partner violence. Their aim is to identify and address problems in the provision of services, promote good practice through training and to promote community awareness and prevention work. This type of intervention has been popular in the United States, Canada, the United Kingdom and in parts of Latin America (Heise and Garcia-Moreno 2002). Coalitions have also been put in place to raise awareness about the problem of youth violence, and similar coordinated community interventions have been put in place in parts of Africa to address child sexual abuse. These types of intervention have seldom been rigorously evaluated and the limited findings that do exist suggest that the efficacy of the services provided, particularly in the cases of partner violence and child abuse, may be more important than the community organizing per se (Heise and Garcia-Moreno 2002).

Residential mobility programmes are one of the few types of community-level interventions that have been evaluated in randomized control trials. These types of

<table>
<thead>
<tr>
<th>Ecological Context</th>
<th>Intervention</th>
<th>Promising¹</th>
<th>Effective²</th>
<th>Unclear³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community</td>
<td>Improving school settings</td>
<td>+</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Screening (IPV, SV, CM, EA)*</td>
<td>+</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improving workplace, residential, primary care settings</td>
<td>+</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Public information campaigns</td>
<td>+ / –</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Community coalitions</td>
<td>+</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Community policing</td>
<td>+</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Housing density/residential mobility programmes</td>
<td>+</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reducing the availability of alcohol</td>
<td>+</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Increasing collective efficacy</td>
<td>+</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>Societal</td>
<td>Reducing access to means</td>
<td>+ / –</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Legal remedies and judicial reforms</td>
<td>+ / –</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reforming education systems</td>
<td>+</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>National policies, programs, norms</td>
<td>+</td>
<td>?</td>
<td></td>
</tr>
</tbody>
</table>

¹Promising: evaluated with a strong design and some evidence of a preventive effect (+), but requires more testing
²Effective: evaluated with a strong design and evidence of a preventive effect (+), demonstrated to be ineffective (–), or evidence is mixed (+ / –).
³Unclear: either poorly evaluated or untested.

*Intimate partner violence (IPV), sexual violence (SV), child maltreatment (CM), elderly abuse (EA)
programme are designed to impact the concentration of poverty by providing housing vouchers or rent subsidies to low-income families, thus giving them a choice in residential location. These programmes have demonstrated positive effects on school outcomes, problem behaviours, mental and physical health and appear to be effective in preventing neighbourhood crime, victimization and social disorder (Ludwig et al. 2001, Anderson et al. 2002, Johnson et al. 2002, Leventhal and Brooks-Gunn 2003, 2004).

3.4. Societal-level interventions

The last level of influence in the ecological model is the societal level. Societal interventions focus on the cultural, social and economic factors related to violence – addressing such issues as access to means, gender, economic or educational inequality – and emphasize changes in legislation, policies and the larger social and cultural environment to reduce rates of violence (table 2). Measures for reducing access to means include restricting access to guns (e.g. bans on certain types of firearms, waiting periods, gun buy-backs, rules on licensing and registration, stricter policing of illegal possession and trafficking of guns and rules for storing them safely). With suicide, it also includes fencing in high bridges, limiting access to roofs and high exteriors of tall buildings, automatic shut-off devices for motor vehicles, restricting access to pesticides and fertilizers and measures to make prescription drugs safer (e.g. packaging and monitoring size and use).

There is some evidence that restricting access to means is effective in reducing suicide (Sloan et al. 1990, Loftin et al. 1991, Carrington and Moyer 1994, Bowles 1995). With interpersonal violence, there have also been a few studies showing a preventive effect (Loftin et al. 1991, Villaveces et al. 2000). However, a recent systematic review of all the measures pertaining to firearms found insufficient evidence to conclude whether or not such measures are effective – citing inconsistencies in the findings and serious methodological flaws in the studies themselves (Hahn et al. 2003b).

The evidence for legislative and judicial remedies is also mixed. Measures to criminalize abuse by intimate partners, to broaden the definition of rape, to criminalize the harsh, physical punishment of children in various settings and mandatory reporting laws for child and elderly abuse have been instrumental in bringing these issues out into the open and dispelling the notion that violence is a private family matter. In this regard, they have been very important in shifting social norms (Krug et al. 2002). However, the evidence surrounding the deterrent value of arrest in cases of domestic violence shows that it may be no more effective in reducing violence than other police responses, such as issuing warnings or citations, providing counselling or separating couples (Fagan and Browne 1994, Garner et al. 1995). Some studies have also shown increased abuse following arrest, particularly for unemployed men and those living in impoverished areas (Fagan and Browne 1994, Garner et al. 1995). Protective orders can be useful, but enforcement is uneven and there is evidence that they have little effect on men with serious criminal records (Heise and Garcia-Moreno 2002). In cases of rape, reforms related to the admissibility of evidence and removing the requirement for victims’ accounts to be corroborated have also been useful, but are also ignored in many courts throughout the world (Du Mont and Parnis 2000, Jewkes et al. 2002).

As for the other societal approaches, much could be done in the way of educational reforms, policy changes to reduce poverty and inequality and improve support for families. More could also be done in terms of changing social and cultural norms around issues of gender and to address racial and ethnic discrimination and harmful traditional practices. Unfortunately, although critically important, many remain largely untested ideas.

4. Using the evidence-base to guide action

The evidence-base for prevention programmes has largely come from developed countries. This is not to say that prevention programmes are not in place in developing countries but, rather, many have not been systematically and rigorously evaluated. The extent to which findings from developed countries can be generalized to developing countries is unclear. Whether such programmes produce similar results in developing countries is a question that should be explored by violence prevention researchers and practitioners in developing countries and one that should also be considered by donors. A substantial, yet insufficient amount of development aid is currently being invested by bilateral and other international development agencies on programmes that the science-base from developed countries suggests is of questionable value in preventing violence (such as peer mediation/counselling, gun buy-backs and gang prevention programmes). Rigorous evaluation of these programmes in developing country settings will help to answer the question of whether this aid is being wisely invested.

5. Conclusion

The current state of the science in violence prevention reveals both progress and a number of remaining challenges. In general, it is possible to identify some promising approaches, some effective approaches and many more that still require rigorous testing, particularly in developing countries. It is important to keep in mind that prevention research is an iterative and continuous process. It involves identifying the nature of the problem through epidemiological work, continuous specifying and clarifying of risk and
protective factors and finding ways to translate them into programmes, extensive pilot testing and refining of programmes in different settings and establishing how best to facilitate their diffusion. It is also a process that poses many challenges.

One of the key challenges is empowering stakeholders with the tools for planning, implementing and evaluating programmes. It is one thing to push for evaluation, it is another to push for it without attending to building the proper infrastructure and equipping stakeholders with the necessary tools, resources and know-how. This is an issue not only for those doing prevention work, but also for donors and decision-makers in terms of where investments should be made.

Another challenge is bridging science and practice. It is insufficient to identify effective approaches. Researchers and practitioners also need to identify ways to get programmes disseminated and adopted in different settings and with different populations. This is proving to be a far greater challenge than getting programmes developed and evaluated in the first place. It is also a challenge that is not unique to violence prevention programmes.

Attention also needs to be paid to documenting and sharing experiences. Part of the reason why less is known about prevention efforts in developing countries is because many have not been documented with regard to their general activities, target populations, intervention strategies or evaluation findings when studied. Even in developing countries, much more could be done beyond disseminating information in peer-review journals.

Violence is an important public health problem and one where public health has a strong role to play in helping governments to increase their knowledge of and confidence in workable interventions. Confronting long-established attitudes and practices, particularly that nothing can be done about violence, with knowledge and evidence is vital so that decision-makers can see that there are other options besides attending to just policing and public security. The key requirement is to work together in partnerships of all kinds and at all levels to develop and disseminate effective responses. Finally, rather than simply reacting to violence, it is critical that good science be used to guide prevention efforts.

References


Violence prevention efforts


