Youth violence prevention

Background

Interpersonal violence kills about 73 000 people in the World Health Organization (WHO) European Region annually, equivalent to 200 per day or 8 per hour. It is the fifth leading cause of injury death (Sethi et al 2006). The highest death rates for males are among those aged 30–44 years and, for females, those aged 45–59 years. Although most deaths (34%) occur in people aged 30–44, the largest number of disability-adjusted life-years (DALYs) lost (39%) are in the group aged 15–29. In youth between the ages of 15-29 years, interpersonal violence is the third leading cause of death (over 12 000 deaths per year) after road traffic injury and self-inflicted injury (Global Burden of Disease Study 2002). It is the fifth leading cause of disability in young people with the loss of 700 000 DALYs in 2002. Both the WHO Regional Committee for Europe resolution RC55/R9 and the European Council Recommendation on the prevention of injuries emphasis a public health approach to the prevention of violence and injuries (WHO Regional Office for Europe 2005 and European Commission 2007)

Defining youth violence

The *World report on violence and health* (Krug et al., 2002) defines violence as the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that results either in injury, death, psychological harm, maldevelopment or deprivation. The typology of violence can be divided into: self-directed (as in suicide or self-harm), interpersonal (child, partner, elder, acquaintance, stranger), collective (in war and by gangs) and "other intentional injuries" (including deaths due to legal interventions). Although this briefing is only concerned with interpersonal violence in youth, many of the risk factors are cross cutting and there are synergies in the strategies for prevention, whether they address interpersonal, self-directed or collective violence.

For the purposes of this policy briefing youth violence is defined as a form of interpersonal violence that takes place in individuals aged 15 to 29 years, or in small groups, and can be psychological as well as physical. It is an insidious and frequently deadly social problem. It takes place in the home, in the streets and other public settings, in the workplace and in institutions such as schools, hospitals and residential care facilities. Data are only readily available for violence resulting in death. DALYs measure the physical consequences of violent injuries, but do not capture the psychological and reproductive health consequences – which can be large – which are not measured by typical information systems (Butchart et al 2004). Routine data are not available for separate types of violence, but inferences can be made by age and gender. Youth violence includes a range of aggressive acts, from bullying and fighting to assaults and homicide. Reports suggest that around 45% of schoolchildren have been bullied at some time (McVeigh at al 2005, Currie et al 2004).

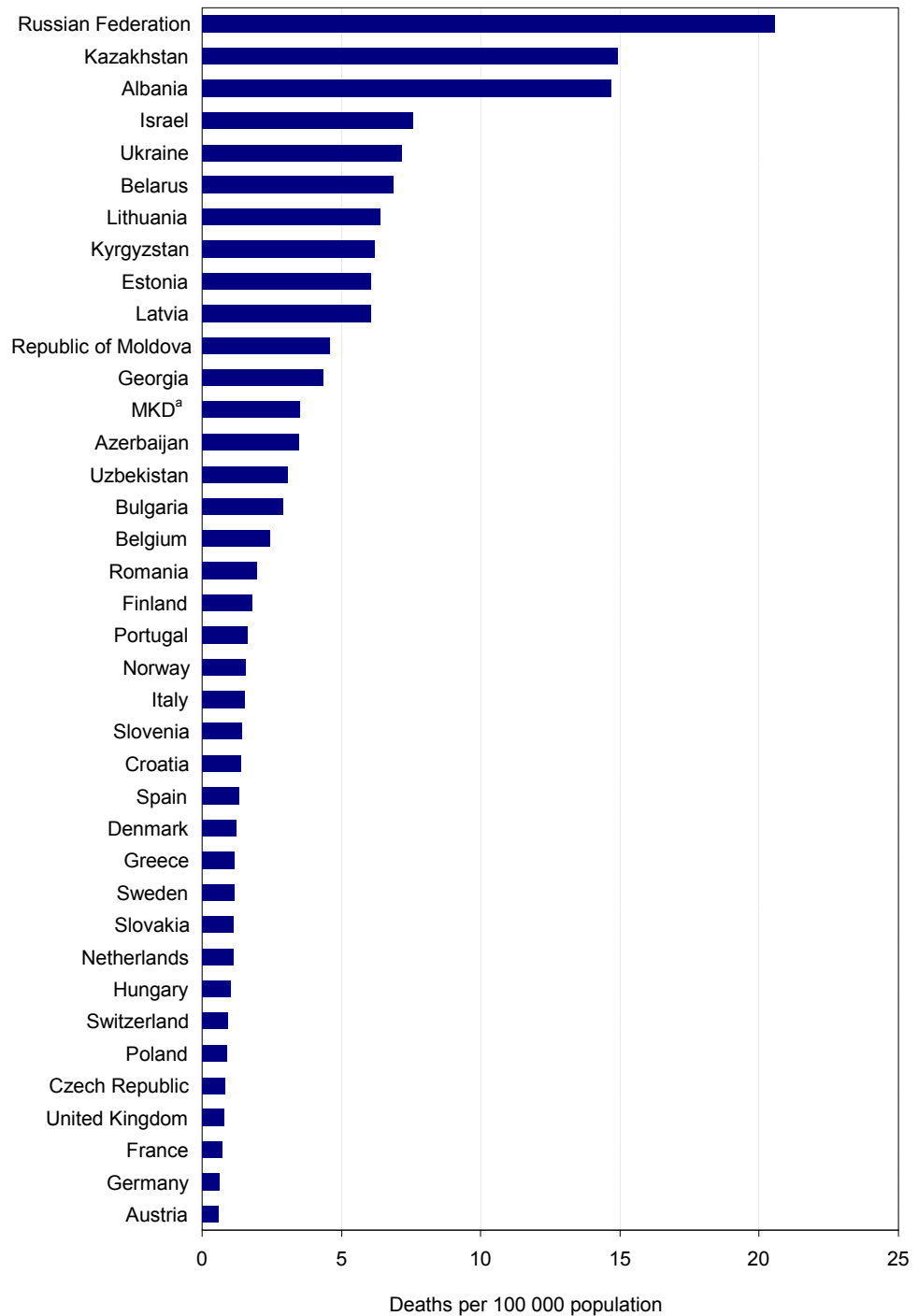## The scale of youth violence in the WHO European Region

There are marked inequalities in mortality from youth violence in the Region. The highest rates are in low- and middle-income countries (LMIC), while those in high-income countries (HIC) are among the lowest in the world. A comparison of countries shows that the lowest rates are in the Nordic countries and western and central Europe (Fig. 1). The countries with the highest rates are the Baltic states and the north-western and southern countries in the Commonwealth of Independent States (CIS).

In addition to the intercountry variations in levels of violence, there is also strong evidence that indicates that even within countries with the lowest violence mortality rate, people with low socioeconomic status and people who live in less affluent areas die more often by violence than do people who live in other areas (Laflamme et al 2009). Study from the United Kingdom shows that youth living in deprived areas were disproportionately exposed to violence and were nearly six times more likely to be admitted to emergency hospitals for injuries due to assault (Bellis et al 2008).

Fig. 1   Standardized mortality rates for assault in people aged 15-29 in the WHO European Region, averages for a three-year period, 2004-2006 or most recent three years

Deaths per 100 000 population

[a] The former Yugoslav Republic of Macedonia

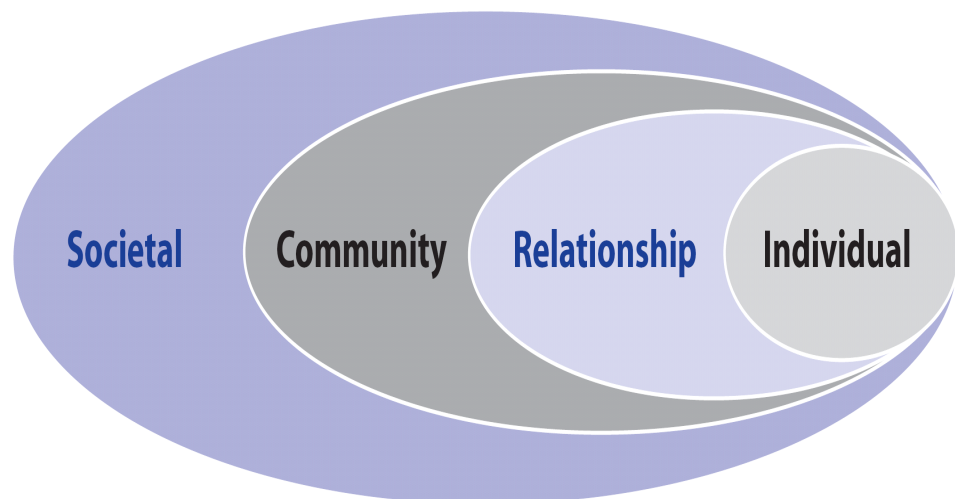*Source: Mortality by 67 causes of death, age and sex (off-line version), supplement to the European health for all database (HFA-MDB). 2008*

Policy briefing: Youth violence prevention

Risk factors of youth violence

The ecological model is useful for considering risks as it takes into account that interpersonal violence is an outcome of interaction among many factors at different levels – the individual, the relationship, the community and the societal level (Fig. 2) *(Krug et al 2002, Mercy et al 1993, Bronfenbrenner 1979)*.

Fig. 2   The ecological framework on levels of intervention against youth violence

Source: Krug et al 2002

Individual risk factors include childhood aggressive behaviour, impulsivity, low educational achievement and aggressive beliefs and attitudes . Relationship or family risk factors include being subjected to harsh physical punishment and humiliation, witnessing violence in the home, having poor parental supervision and associating with delinquent peers. At the community and societal levels, there is evidence that young males who live in neighbour-hoods with high crime rates and poverty are prone to violence. Gang membership is associated with violent behaviour, and studies have shown that youth entering gangs become more violent and engage in riskier, often illegal activities (Krug et al 2002). Alcohol and drugs are precipitants to violent behaviour and are associated with both victims and perpetrators (Krug et al 2002, Sethi et al 2006). Alcohol is implicated in up to 40% of violent attacks, though this may vary by setting. The introduction of free-market principles, the aggressive marketing strategies of alcohol manufacturers (particularly to youth), weak regulatory capacity, increasing social tolerance, illegal production and smuggling of alcohol have led to increased consumption.
The alcohol level in the blood is influenced by the type, volume and pattern of drinking. Binge drinking of spirits is relatively common in youth in many countries and is strongly associated with violence. Countries such as some of the European countries in transition, which have low social capital and traditionally high levels of alcohol consumption, have seen large increases in alcohol misuse in those people who are the weakest in terms of social support and occupational status (Sethi et al., 2006). Experiencing or witnessing violence can lead to the harmful use of alcohol. The depiction of violence in the media may have some role (Krug et al 2002). Violence generally is more prevalent in societies that have undergone armed violence or repression, and in those undergoing great social and economic turmoil, such as the Region's LMIC (Zwi 2003, Walberg et al 1998). It is also higher in societies showing large inequalities in wealth and lacking social protection policies.

Prevention of youth violence

Most of the evidence comes from interventions at the individual and relationship level, which are targeted during infancy and childhood to prevent behavioural problems, as well as in adolescence and early adulthood. Pre-school enrichment programmes improve educational achievement and self-esteem and are associated with less violence in later life. Social development programmes to reduce aggressive and antisocial behaviour try to improve social skills with peers and promote cooperative behaviour by teaching young people to manage anger, adopting a social perspective, resolving conflicts and solving social problems (McVeigh et al 2005, Kellerman et al 1998). These are most effective if delivered in preschool or school and targeted to high risk groups. A programme to reduce bullying using behavioural techniques has reduced the incidence of bullying by half in Bergen, Norway, and is being successfully implemented in the United Kingdom (McVeigh et al 2005, Krug et al 2002, Olweus et al 1998).

Home visitation and training in parenting are examples of programmes aimed at the relation-ship level. The former involves regular visits to a child's home by a health professional and provides training, support, counselling and monitoring for low-income mothers and families at increased risk of abusing their children. The Triple-P Positive Parenting Programme com-bines a mass-media campaign with both consultations with primary carers to improve parent-ing practices and intensive support to parents with children at risk of behavioural problems; it has been shown to be costeffective in reducing violence (Triple-P News 2001, Saunders 1999).

Promising community and societal-level programmes include those providing child-care, preschool enrichment, safe routes to school, improved street lighting, extracurricular and after-school activities for children and adolescents (such as sports) to reduce involvement in underage drinking and anti social behaviour, improved school environments and monitoring and removal of toxins from the environment. Reducing the availability of alcohol and drugs is important. Changing cultural and social environments – by such means as reducing concen-trations of poverty and income inequalities, altering night-time environments in city centres, reducing economic and social barriers to development, creating job programmes, reducing access to firearms, and strengthening the criminal justice system – are intuitively and ethi-cally appealing societal approaches requiring further evaluation (Kellerman et al 1998, Butchart et al 2004, Hughes et al 2004, Hahn et al 2003). Table 1 shows effective strategies for preventing youth violence by the developmental stage when interventions are targeted and the level of influence in the ecological model.

Table 1. **Strategies for preventing youth violence by developmental stage and level of influence** (adapted from Butchart et al 2004)

	Developmental Stage			
Level of intervention	**Infancy (<3 years of age)**	**Childhood (3-11 years of age)**	**Adolescence (12-19 years of age)**	**Early adulthood (20-29 years of age)**
Individual	Increased access to perinatal and postnatal services	Pre-school enrichment programmes Social development programs Programmes to prevent bullying Home school partnership programmes	Social development programmes Programmes to prevent bullying Academic enrichment programmes Educational incentives	
Relationship	-Home visitation -Training in parenting	-Training in parenting	-Mentoring -Family therapy	
Societal and community		Safe routes to schools Improved street lightning Improved school environments and monitoring	Changing cultural and social norms that support youth violence Improved street lightning Improved school environments and monitoring Reducing availability of alcohol and drugs Altering night-life environment in city centers	Changing cultural and social norms that support youth violence Improved street lightning Reducing availability of alcohol and drugs Altering night-life environment in city centers
	Strengthening police and judicial system Reducing access to firearms Promoting social, economic and cultural rights Reducing concentrations of poverty and income inequalities Reducing economic and social barriers to development Creating job programmes			

Reducing the availability and misuse of alcohol and drugs

Alcohol and drugs are strong precipitants to violent behaviour and they are associated with being both a victim and perpetrator of violence. A lot of the excess adult mortality in the world, has been attributed to alcohol ingestion, with about 20–30% of all intentional injury deaths due to this cause (Lopez et al., 2006). Alcohol is a modifiable risk factor that requires special consideration, given the large burden of injuries attributable to it, particularly in LMIC (World Bank 2005, Shkolnikov 2001, Watt et al 2004, European Alcohol Action Plan 2005). Cost-effective strategies at the population level include legislation, taxation, and restricting or banning advertising (Foxcroft et al 2002, Room et al 2005, Rehm et al 2004). Brief advice by physicians is cost-effective for individuals at risk (Foxcroft et al 2002, Rehm et al 2004). Controlling alcohol misuse will reduce the burden not only from unintentional injuries and violence but also from other alcohol related disorders, such as cardiovascular diseases and cirrhosis (Powles et al 2005). This was demonstrated by the anti-alcohol campaign in the Russian Federation that, after its introduction in 1985, led to a decrease of state retail outlet alcohol sales of 63%, which although offset by an increase in private production, led to an overall fall in alcohol consumption of 25% over a three year period. This resulted in a 33% fall in alcohol-associated violent deaths and an increase in male life-expectancy of 3 years (McKee 1999, Nemstov 1998).

Intersectoral approach to violence prevention

The approach to violence prevention is intersectoral and many programmes require a collaborative approach between the health sector and sectors such as education, justice, and social services (Krug et al 2002, Butchart et al 2004, Sethi et al 2008a, Olds 1998, Reynolds 2001). Some of the interventions defined as effective in systematic reviews of the literature are shown in Table 2 along with the sectors involved.

Table 2. Specific violence prevention activities by effectiveness and sectoral involvement

Intervention	Effectiveness rating	Sectors involved
Training programmes for parents	Effective	Health, social services, faith-based or community, justice
Family therapy for children and adolescents at high risk	Effective	Health, social services, justice
Educational incentives for at-risk high-school students	Effective	Education, social services, justice
Life skills training programmes	Effective	Education, health
Pre- and post-natal nurse home visiting	Effective	Health
Pre-school enrichment programmes	Effective	Education, health, family services
Mentoring programmes	Promising	Social services, education, justice, community, private sector
Home–school partnership programmes promoting the involvement of parents	Promising	Education, social services
Peer mediation and counselling	Ineffective	
Education on the dangers of drug use	Ineffective	

Conclusions

Youth violence is a preventable public health problem but it requires resources and commitment. Risk factors are witnessing violence in the family, poor parenting, poor education, inequalities of wealth, dense concentration of poverty, the availability of firearms, and alcohol and substance abuse (Krug et al 2002). Programmes of pre-school enrichment, social development, home visitation, parenting skills, improved educational attainment and mentoring reduce violence. Social and economic policies such as reducing inequalities in wealth and the concentration of poverty and access to alcohol are also important. The health sector need to act as an advocate for violence prevention and take up a coordinating role in ensuring that there is a multisectoral response to violence prevention (Sethi et al 2008b).

Key messages to policy-makers on youth violence

- Interpersonal violence is the third leading cause of death (over 12 000 deaths per year) and the fifth leading cause of disability in young people.

- In all countries, young males are both the principal perpetrators and victims of violence.

- The risk of violent death in LMIC is 11.3 times that in HIC.

- Witnessing violence in the family, poor parenting, poor education, inequalities of wealth, dense concentration of poverty, the availability of firearms, and alcohol and substance abuse are risk factors.

- Interventions such as positive parenting, life skills training, educational incentives and those targeting alcohol reduction are good investments to prevent violence.

References

- M A Bellis, K Hughes, Z Anderson, K Tocque, S Hughes Contribution of violence to health inequalities in England: demographics and trends in emergency hospital admissions for assault Journal of Epidemiology and Community Health 2008;62:1064-1071

- Bronfenbrenner U. *The ecology of human development*. Cambridge: Harvard University Press, 1979.

- Butchart A et al. *Preventing violence: a guide to implementing the recommendations in the World report on violence and health*. Geneva, World Health Organization, 2004 (http://whqlibdoc.who.int/publications/2004/9241592079.pdf, accessed 25 October 2008).

- Currie C et al., eds. *Young people's health in context. Health Behaviour in School-aged Children (HBSC) study: international report from the 2001/2002 survey*. Health Policy for Children and Adolescents, No. 4, Copenhagen, WHO Regional Office for Europe, 2004 (http://www.euro.who.int/eprise/main/who/informationsources/publications/catalogue/20040518_1, accessed 10 October 2008).

- Consultation of the Member States on elements for a proposal for a Commission Communication and Council recommendation on injury prevention and safety promotion. Luxembourg: European Commission, 2001 (http://www.eu.int/comm/health/ph_determinants/environment/IPP/ev_20051012_en.htm, accessed 28 October 2008).

- *European Alcohol Action Plan 2000–2005*. Copenhagen: WHO Regional Office for Europe, 2000 (http://www.euro.who.int/document/E67946.pdf).

- Foxcroft DR, Ireland D, Lister-Sharp DJ, Lowe G, Breen R. Primary prevention for alcohol misuse in young people. The Cochrane Database of Systematic Reviews 2002, Issue 3.

- The global burden of disease: 2004 update [web site]. Geneva, World Health Organization, 2008 (http://www.who.int/healthinfo/global_burden_disease/2004_report_update/en/index.html, accessed 10 November 2008).

- Hughes K et al. *Taking measures: a situational analysis of alcohol in the North West*. Liverpool, Centre for Public Health, 2004.

- Hahn RA et al. *First reports evaluating the effectiveness of strategies for preventing violence: firearms laws.* Findings from the Task Force on Community Preventive Services, Morbidity and Mortality Weekly Report, 2003 (http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5214a2.htm, accessed 25 October 2008).

- Kellermann AL et al. Preventing youth violence: what works? *Annual Review of Public Health,* 1998, 19:271-292.

- Krug E, Dahlberg L, Mercy J. *World report on violence and health*. Geneva, 2002 (http://www.worldbank.org/data/countryclass/countryclass.htm, accessed 18 December 2007).

- Laflamme L, Sethi D, Burrows S, Hasselberg M, Racioppi F, Apfel F (2009). *Addressing the socioeconomic safety divide: a policy briefing.* Copenhagen, WHO Regional Office for Europe(http://www.euro.who.int/Document/E92197.pdf, accessed 25 March 2009).

- Lopez AD, Mathers CD, Ezzati M, Jamison DT, Murray CJL (eds) (2006). Global burden of disease and risk factors. New York, World Bank.

- Mercy JA et al. Public health policy for preventing violence. *Health Affairs,* 1993, 12:4.

- McVeigh C et al. *Violent Britain. People, prevention and public health*. Liverpool, John Moores University, 2005.

- McKee M. Alcohol in Russia. Alcohol and Alcoholism 1999;34:824-829.

- *Mortality by 67 causes of death, age and sex (off-line version), supplement to the European health for all database (HFA-MDB*' Copenhagen, WHO Regional Office for Europe, 2005 (http://www.euro.who.int/hfadb, accessed 28 October 2008).

- Nemtsov AV. Alcohol-related harm and alcohol consumption in Moscow before, during and after a major anti-alcohol campaign. Addiction 1998:93:1501-1510.

- Olds D, Henderson CR Jr, Cole R, et al (1998) Long-term effects of nurse home visitation on children's criminal and antisocial behavior: 15-year follow-up of a randomized controlled trial. JAMA, 280: 1238-1244.

- Olweus D, Limber S, Mihalic S. *Bullying prevention program*. Boulder, CO, Center for Study and Prevention of Violence, University of Colorado, 1998.

- The global burden of disease: 2004 update [web site]. Geneva, World Health Organization, 2008 (http://www.who.int/healthinfo/global_burden_disease/2004_report_update/en/index.html, accessed 10 November 2008).

- Hughes K et al. *Taking measures: a situational analysis of alcohol in the North West*. Liverpool, Centre for Public Health, 2004.

- Hahn RA et al. *First reports evaluating the effectiveness of strategies for preventing violence: firearms laws.* Findings from the Task Force on Community Preventive Services, Morbidity and Mortality Weekly Report, 2003 (http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5214a2.htm, accessed 25 October 2008).

- Kellermann AL et al. Preventing youth violence: what works? *Annual Review of Public Health,* 1998, 19:271-292.

- Krug E, Dahlberg L, Mercy J. *World report on violence and health*. Geneva, 2002 (http://www.worldbank.org/data/countryclass/countryclass.htm, accessed 18 December 2007).

- Laflamme L, Sethi D, Burrows S, Hasselberg M, Racioppi F, Apfel F (2009). *Addressing the socioeconomic safety divide: a policy briefing.* Copenhagen, WHO Regional Office for Europe(http://www.euro.who.int/Document/E92197.pdf, accessed 25 March 2009).

- Lopez AD, Mathers CD, Ezzati M, Jamison DT, Murray CJL (eds) (2006). Global burden of disease and risk factors. New York, World Bank.

- Lopez AD, Mathers CD, Ezzati M, Jamison DT, Murray CJL (eds) (2006). Global burden of disease and risk factors. New York, World Bank.

- Mercy JA et al. Public health policy for preventing violence. *Health Affairs,* 1993, 12:4.

- McVeigh C et al. *Violent Britain. People, prevention and public health*. Liverpool, John Moores University, 2005.

- McKee M. Alcohol in Russia. Alcohol and Alcoholism 1999;34:824-829.

- *Mortality by 67 causes of death, age and sex (off-line version), supplement to the European health for all database (HFA-MDB*' Copenhagen, WHO Regional Office for Europe, 2005 (http://www.euro.who.int/hfadb, accessed 28 October 2008).

- Nemtsov AV. Alcohol-related harm and alcohol consumption in Moscow before, during and after a major anti-alcohol campaign. Addiction 1998:93:1501-1510.

- Olds D, Henderson CR Jr, Cole R, et al (1998) Long-term effects of nurse home visitation on children's criminal and antisocial behavior: 15-year follow-up of a randomized controlled trial. JAMA, 280: 1238-1244.

- Olweus D, Limber S, Mihalic S. *Bullying prevention program*. Boulder, CO, Center for Study and Prevention of Violence, University of Colorado, 1998.

- Powles JW, Zatonski W, Van der Hoorn S, Ezzati M. The contribution of leading diseases and risk factors to excess losses of healthy life in eastern Europe: burden of disease study. BMC Public Health 2005;5:116.

- Rehm J, Room R, Monteiro M, et al. In: Ezzatti M, Lopez AD, Rodgers A, Murray CJL, eds. *Comparative quantification of health risks. Global and regional burden of disease attributable to selected risk factors*. Vol 1. Geneva: World Health Organization, 2004:959-1108.

- Reynolds AJ, Temple JA, Robertson DL, et al. (2001) Long-term effects of an early childhood intervention on educational achievement and juvenile arrest: a 15-year follow-up of low-income children in public schools. JAMA, 285: 2339-2246

- Room R, Babor T, Rehm J. Alcohol and public health. Lancet 2005;365:519-530.

- Sanders M. Triple-P-Positive Parenting Program: towards an empirically validated multi-level parenting and family support strategy for the prevention of behavioural and emotional problems in children. *Clinical Child and Family Psychology Review,* 1999, 2:71-90.

- Sethi D, Racioppi F, Baumgarten I, Vida P. *Injuries and violence in Europe. Why they matter and what can be done*. Copenhagen: WHO Regional Office for Europe, 2006 (http://www.euro.who.int/InformationSources/Publications/Catalogue/20060601_1, accessed 20 February, 2009).

- Sethi D & Butchart A. Violence/Intentional Injuries -- Prevention and Control. In: Heggenhougen HK and Quah SR (eds) *International Encyclopedia of Public Health*, vol. 6, pp 508--518. San Diego: Academic Press, 2008a.

- Sethi D, Racioppi, F, Frerick F, Frempong N. *Progress in preventing injuries in the WHO European Region. Implementing the WHO Regional Committee for Europe Resolution on prevention of injuries and the Recommendation of the European Council of the European Union on the prevention of injury and promotion of safety*. Copenhagen, WHO Regional Office for Europe, 2008b (http://www.euro.who.int/InformationSources/Publications/Catalogue/20080912_1, accessed 26 March, 2009).

- Shkolnikov V, McKee M, Leon DA. Changes in life expectancy in Russia in the mid-1990s. Lancet 2001;357:917-921.

- Triple-P-Positive Parenting Program. *Triple P News,* 201, 4:1.

- Walberg P et al. Economic change, crime, and mortality in Russia: regional analysis. *BMJ,* 1998, 317:312-318.

- World Bank. Dying too young- addressing premature mortality and ill health due to non-communicable disease and injuries in the Russian Federation, Washington, DC: World Bank, 2005

- Watt K, Purdie D, Roche A, McClure R. Risk of injury from acute consumption and the influence of confounders. Addiction. 2004, 99:1262-1273.

- Zwi A. Injuries, inequalities and health: from policy vacuum to policy action. In: Leon D, Walt G, eds. *Poverty, inequality and health*. Oxford: Oxford University Press, 2003:263-282.

- *WHO Regional Committee for Europe resolution EUR/RC55/R9 on prevention of injuries in the WHO European Region*. Copenhagen, WHO Regional Office for Europe, 2005 (http://www.euro.who.int/eprise/main/WHO/AboutWHO/Governance/resolutions/2005/20050922_1, accessed 28 October 2008).

Acknowledgements