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## Violence and adolescence in urban settings: A public health approach based on the MLIVEA framework

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**Violence and Adolescence in Urban  
Settings: A Public Health Approach  
Based on the MLIVEA Framework**

von

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## Abstract

Adolescent violence is a public health issue with global relevance and far-reaching health consequences. It impairs the well-being of those involved and makes demands on health services. The review gives insight into the determinants leading to the health effects of urban violence focusing on young people. For this purpose a new comprehensive framework has been developed and applied. The new framework is called MLIVEA framework due to the structure of its components, which are macro level, local setting, individual level, violent act, health effect and action. Determinants of the macro level are forming societal conditions that contribute to the development of violence in cities. The different local settings are all affected by the macro level and are connecting links to the individual level. The individual level shows risk factors of the individual adolescent concerning psychological, social and biological aspects of personality. The violent acts refer to actual violent events leading to the violence-related health effects. Action can be taken to reduce violence at the macro level, at the local setting level and at the individual level. The advantage of the new framework lies in its presentation of the whole process and the interrelations of factors, which lead to adolescent violence in cities. The MLIVEA framework shows: 1. It is necessary to understand the causes of violence at all the different levels for each city. 2. Best results are gained by carrying out interventions at all the levels. 3. Violence and related health consequences are preventable and have relevance for public health science and action.

In vielen Ländern gefährden Gewalttaten nicht nur den sozialen Zusammenhalt, sie belasten auch die Gesundheit der Bevölkerung. Insbesondere Jugendliche und junge Erwachsene in Städten sind häufig an Gewalttaten beteiligt, entweder als Opfer oder als Täter. Bei ihnen stellen die gesundheitlichen Folgen von Gewalt eine wichtige Ursache von Mortalität und Morbidität dar. Der Artikel gibt einen Einblick in die Determinanten, die zu den Gesundheitsfolgen von städtischer Gewalt führen und konzentriert sich dabei auf Jugendliche. Für diesen Zweck wurde ein umfassendes Modell entwickelt und angewendet. Das neue Modell wird entsprechend seiner Komponenten MLIVEA genannt: Macro Level, Local Setting, Individual Level, Violent Act, Health Effect und Action. Der Vorteil des Modells liegt in der Darstellung des gesamten Prozesses von der Gewaltentstehung über die Gewalttat und seinen gesundheitlichen Folgen bis hin zu geeigneten Interventionen. MLIVEA zeigt, dass Gewalt und damit zusammenhängende Folgen für die Gesundheit nicht unvermeidbar sind, Präventionsmöglichkeiten durchaus existieren und Public Health dazu beitragen kann, sie zu finden und umzusetzen.

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## 1 Violence and public health

Violence is a public health issue with global relevance and far-reaching health consequences, affecting the well-being of those involved and making demands on health services. Young urban people are offenders and victims in different forms of interpersonal violence. In general, violence has a major impact on mortality and morbidity in adolescence in many countries.

In this paper, the problem of adolescent violence in cities is described from a public health perspective. Special emphasis is laid on the determinants of violent behaviour; their description and analysis is done within a comprehensive framework which is, according to its levels of analysis, called "MLIVEA" (*macro level, local setting, individual level, violent act, health effect, and action*).

### 1.1 Health and violence: an issue

The health consequences of violence will be a problem that the health system and other sectors have to tackle now and later on. Health is involved in many respects of violent acts. As a result of their injuries or traumas, victims of violence come into contact with the health system. Damages caused by violent acts result in a reduction in health: Victims can be hurt physically, mentally, or socially. Accordingly, the health system – in terms of its services, the role of health professionals, and the health expenditures – is concerned with the consequences of violence. This applies also to those who commit acts of violence: Not only are persons attempting suicide admitted into the health system, also in cases of interpersonal offences the psychological and social health of the perpetrator is of great relevance.

To understand more about violence as a health problem, a broadly applicable definition is needed. Violence exists in many forms (cf. chapter 3.1), and a definition should encompass a general understanding and scientific measurement of the problem, such as the working definition the World Health Organisation (WHO 1998a: 8): "Violence is the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation."

The use of physical force or power does not only include physical action but also neglect and emotional abuse, occurring e.g. in parent-child relationships. "Intention", sometimes difficult to uncover, should be seen as a continuum. The expression of "power" can reflect

the gender dimension of violence for example, which can be found in many interpersonal violent acts, when the perpetrator is male and the victim is female (WHO 1998a; Heise 1993).

## 1.2 Mortality and morbidity due to violence

Globally, violence is a health problem with enormous consequences. In 1993, world-wide, over one million people died as a result of homicide or suicide. To this, one must add the victims of wars and civil unrest, which killed millions of people in the last few years – including children and women (WHO 1998c). According to the World Bank (1997), society also bears high social costs of violence, e.g. in the form of an overall climate of fear replacing solidarity and co-operation in community life (cf. Omenn 1998; Harpham and Reichenheim 1994).

**Table 1: Disease burdens of 15 leading causes of death, world, 1990 and 2020**

Rank	1990	2020
1	Lower respiratory infections	Ischaemic heart disease
2	Diarrhoeal diseases	Unipolar major depression
3	Conditions arising during the perinatal period	Road traffic accidents
4	Unipolar major depression	Cerebrovascular disease
5	Ischaemic heart disease	Chronic obstructive pulmonary disease
6	Cerebrovascular disease	Lower respiratory infections
7	Tuberculosis	Tuberculosis
8	Measles	<b>War</b>
9	Road traffic accidents	Diarrheal diseases
10	Congenital anomalies	HIV
11	Malaria	Conditions arising during the perinatal period
12	Chronic obstructive pulmonary disease	<b>Violence</b>
13	Falls	Congenital anomalies
14	Iron-deficiency anaemia	<b>Self-inflicted injuries</b>
15	Protein-energy malnutrition	Trachea, bronchus, lung cancer
16	<b>War</b>	
17	<b>Self-inflicted injuries</b>	
18	<b>Violence</b>	

Based on DALYs

Source: Murray and Lopez (1996: 375).

To apprehend the health consequences of violence, a general overview of its burden at the global level might be helpful. In 1990, violence contributed 4.1% to the global burden of disease and is likely to increase up to 7.1% until 2020. These "burden of disease"-estimations are based on calculations of Disability-Adjusted Life Years (DALYs), which include data on mortality as well as disability. Each DALY indicates the loss of a year of healthy life – that is, time lived with a disability or time lost through premature death. The higher the DALYs, the greater the burden. The calculations for violence include self-directed violence (suicide), different forms of interpersonal violence, and war-related violence.

For the year 2020, Murray and Lopez (1996) estimate that war will rank eighth, other interpersonal violence twelfth, and self-inflicted injuries fourteenth as the leading causes of deaths (table 1). Concluding, it can be assumed that violence in cities is a great hazard to the people's health, and there is urgent need to take action.

### **1.3 Public health approach to violence**

"Public health is one of the efforts organized by society to protect, promote, and restore the people's health. It is the combination of sciences, skills, and beliefs that is directed to maintenance and improvement of the health of all the people through collective or social actions. The programs, services, and institutions involved emphasize the prevention of disease and the health needs of the population as a whole. Public health activities change with changing technology and social values, but the goals remain the same: to reduce the amount of disease, premature death, and disease-produced discomfort and disability in the population." (Last 1995: 134)

Violence in its different forms can be effectively addressed by public health and health sciences, as they focus on a multidisciplinary and intersectoral approach with an explicit interest towards identifying effective strategies of prevention. Though focusing on health, which encompasses physical, mental and social well-being (WHO, 1989: 1), working with some disciplines and not others would be rudimentary to address the health of the population, according to the WHO (1998a: 20).

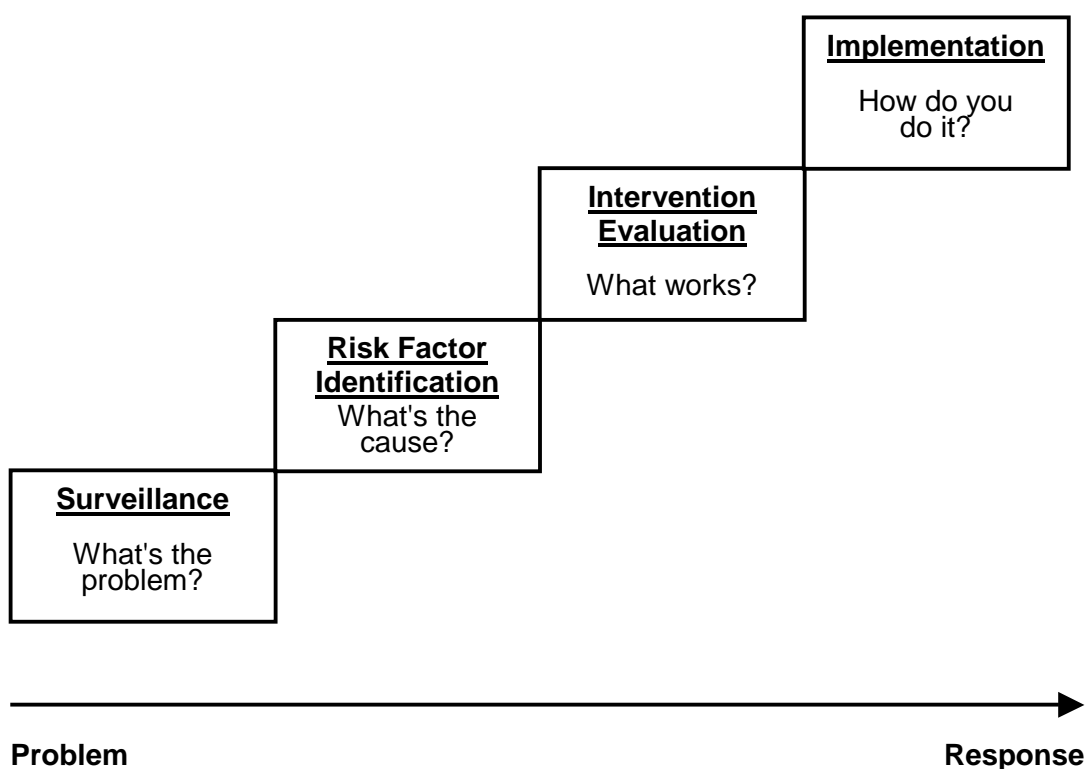
"Public Health, with its emphasis on using scientific methods for identifying and dealing with [...] underlying causes, is a framework for medium to long-term prevention. Public health is therefore a resource for crime and violence prevention that operates together with, rather

than against, the short-term measures applied by police and the courts" (Butchart and Emmett 2000: 3-4).

Important steps for monitoring, mitigating and reducing violence are through epidemiological surveillance, medical and psychological therapy, social work and interdisciplinary prevention. Broad intersectoral and multidisciplinary public health partnerships are the basis for this.

Mercy et al. (1993) and WHO (1998a) propose four steps in the public health approach to violence, called the "public health prevention action cycle" (figure 1). This approach begins with the definition of the problem, i.e. data collection on health consequences, mortality, morbidity, demographic information of the involved persons, characteristics of the situation, costs incurred by the incident and the victim-perpetrator-relationship. In the second step, causes and risk factors e.g. through epidemiological studies are identified. After that, it is possible to carry out and test interventions based on the information obtained. Finally, after the evaluation of programmes, interventions which are likely or proven to be effective can be implemented. WHO (1998a) emphasises that in reality the procedure is less linear and some steps occur simultaneously.

**Figure 1: Public health approach**



Source: Rosenberg et al. (1998: 1225)



The strategy of the public health prevention action cycle fits well the public health approach of primary, secondary and tertiary prevention, which is also applicable to violence:

- Primary prevention to create conditions not leading to violence;
- secondary prevention ensuring appropriate care causing no further harm (early detection);
- tertiary prevention to provide long term care for optimal reintegration.

Beyond the traditional "old" public health concept, public health offers methods and approaches emphasizing the empowerment of people and communities in order to help them see that violence is not inevitable (cf. WHO 1998a). In particular, health promotion (WHO 1986) can contribute to this, also the "new" public health approach and health sciences (Hurrelmann and Laaser 1998). The concept of health promotion offers opportunities to deal with the consequences and prevention of adolescent violence, based on the presumption that violence is learned and therefore capable of being unlearned – in particular regarding young people (WHO/UNESCO, 1998). Violence prevention with adolescents can be a chance to break the cycle of violence over generations.

After all, public health contributes to the scientific development of effective treatments and therapies to reduce the severity of health consequences. Furthermore, WHO (1998a) mentions the aspect of safety which should be part of health education and community programmes. In the extreme form of violence, which is war, the health sector plays an important role in humanitarian assistance.

#### **1.4 Violence: a problem of cities and of young people**

It is noticeable that the problem of violence mainly concentrates in urban areas. In Sao Paulo e.g., 7,358 were murdered in 1995, in Los Angeles 2,000 and in Bogota 5,000. In many urban areas, violent crime has increased in recent years (Krug et al. 1998; Millner 1998; Zvekic and Alvazzi del Frate 1995).

Violent acts account for about 25% to 30% of all urban crimes. Vanderschueren (1998) estimates that urban violence has increased between 3% and 5% each year over the past two decades; victimization rates however may vary considerably by region and city (table 2).

**Table 2: Victimization rates (violence against the person) in urban areas, five-year-period**

Region	%
Western Europe	15
North America	20
South America	31
Eastern Europe	11
Asia	11
Africa	33

Based on a sample of 74,000 persons in 39 countries;  
Source: Vanderschueren (1998).

The rise in urban violence is an important fact considering that in the near future increasingly more people all over the world will live in urban areas. Almost two thirds of all people will be resident in cities by the year 2030, particularly in mega-cities (UN 1997). In general, cities in the southern hemisphere have populations younger than the global average, with a high proportion of male adolescents, who are the main perpetrators of violent acts (Millner 1998). It is striking that young people are often involved as members of street gangs or as street children. In cities moreover, the age of offenders is decreasing and murder is more common, as Vanderschueren (1998) points out. In general, the age group which is most affected by violence are young people.

### 1.5 The MLIVEA framework

Before depicting determinants of juvenile delinquency and violent behaviour, the following section addresses the theoretical background and the development of the new framework used to explain potentially influencing factors of adolescent violence in cities.

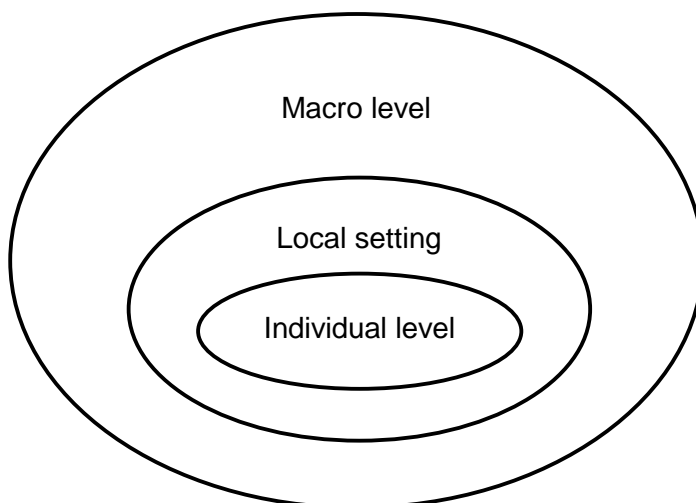
Every country, every city, and every neighbourhood is different, posing its own specific conditions, which limit comparisons of the different factors causing adolescent violence. Nevertheless, one can distinguish generally proven hypotheses from less successful ones by making reasonable abstractions and by using frameworks and models in order to reduce and simplify the complex reality. This is often a good starting point for deepening one's understanding of the phenomenon and finding comprehensive solutions. This approach is useful for adolescent violence in cities that is caused by several factors, not all of which we know or whose interactions we understand (Heitmeyer et al. 1998; Friedrichs 1983).

For a deeper understanding and to make the problem of adolescent violence in cities more vivid, a new framework has been developed (cf. Jordan 2000). It is called the "MLIVEA framework" due to the structure of its components, which are *macro level*, *local setting*, *individual level*, *violent act*, *health effect*, and *action*. The advantage of the framework is the presentation of the whole process and the interrelationships of factors which lead to violence. The development of the MLIVEA model was inspired by a framework from the environment and health research and is described by Corvalán et al. (1996; see also WHO 1997b).

The issue that plays an important part in understanding the development of violence is that those determinants of the macro level, the local setting and the individual level are mutually reinforced (as shown in figure 2). Violent acts can influence even those determinants that caused violence in the first place.

Instead of using arrows between the different levels, in the new figure terms are adopted which express the way the levels affect each other. This is done to reduce complexity rather than to mirror reality completely. The arrows used at the action level show where the action is located, but they also affect other levels (see figure 3).

**Figure 2: Presentation of levels**



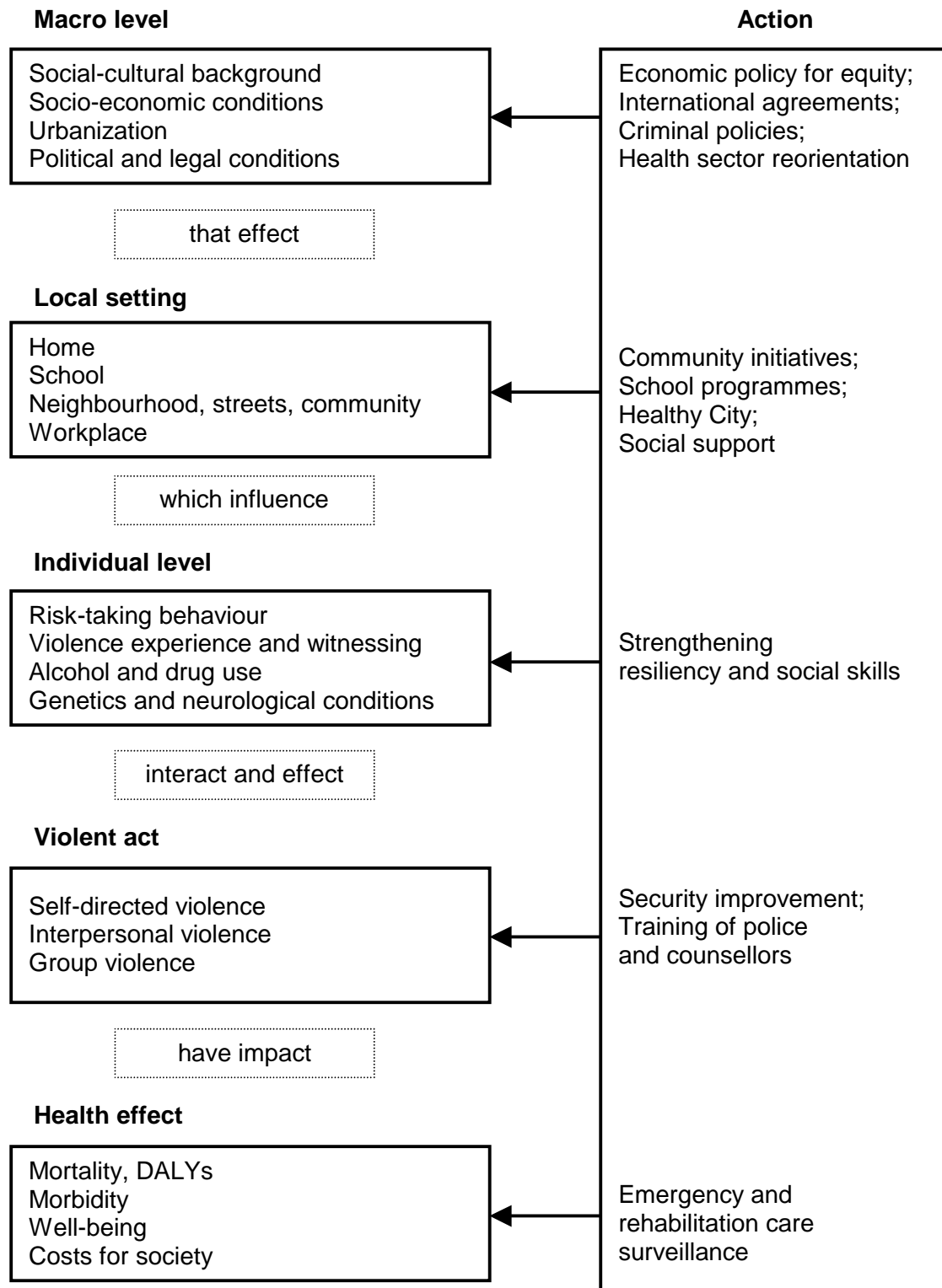
Source: Jordan (2000).

Regarding urban adolescent violence, health determinants are operating on different levels. Interventions are necessary – however, in some areas we do not know enough about potential side effects or unintended consequences. A multilevel framework is the first step in making interventions more effective and predictable. These frameworks offer an opportunity for systematic surveillance and information analysis in the interest of decision-making.

The MLIVEA framework presents an overview of the relevant factors causing adolescent violence. Determinants of the macro level are the underlying causes that promote social, cultural and scientific-technical change. They are factors that drive the social environmental processes not only at the local level but at the level of society as a whole. Factors of the macro level result in the generation of conditions, which changes the social environment at the local level. The different settings, such as home, school, neighbourhood and workplace, affect adolescent violence in cities and represent an "entry point" to the process of social change. They offer an effective point of prevention and control. The vulnerability of youth relates to risk factors at the individual level which refers to those events or characteristics that increase the likelihood of developing any form of violent behaviour. Often individual risk factors can be regarded as a response to pressure and changes in the local setting. A violent act refers to actual events in society that lead to violence-related health effects, which can be described and monitored e.g. in terms of mortality and morbidity. The action level shows what specific measures can be taken to reduce violence at the macro level, the local setting, and the individual level. A detailed discussion of the different levels is given in the following chapters.

MLIVEA makes visible the various aspects of the problem including all influencing factors at the different levels. This might be helpful for decision makers, for example on the city level in setting priorities for political action.

**Figure 3: The MLIVEA framework for the explanation of adolescent violence in cities**



Source: Jordan (2000).

## 2. Determinants of adolescent violence in cities

### 2.1 Macro level factors influencing urban violence

Macro level determinants represent dimensions of the social, economic, cultural and political environment. Determinants of the macro level are the underlying causes of social change driving social processes not only at the city level but in the whole of society. In this manner, the macro level creates general societal conditions which affect the development of young people on the one hand, and the formation of adolescent violence in cities on the other. In the following sections, urbanization, socio-economic conditions, social-cultural background, and finally political and legal conditions as some dimensions of the macro level are outlined.

#### 2.1.1 Urbanization of the world and its consequences

In the near future, less people will live in rural regions and more and more people will be resident in urban areas all over the world (cf. table 3). According to estimates of the United Nations (UN 1999), population growth and demographic development will result in more than two thirds of the eight billion people of the world living in urban agglomerations and more than 33 mega-cities with more than ten million inhabitants by the year 2030. The urban population of the developing countries increased five-fold with growth rates of 3%, as pointed out by the 44th World Health Assembly in its resolution WHA44.27 about the urban health crisis (WHO 1991).

**Table 3: Urban and rural population and percentage urban, 1996 and 2030**

Region	Population (thousands)				Percent Urban	
	Urban		Rural			
	1996	2030	1996	2030	1996	2030
World total	2,635,645	5,117,038	3,132,129	3,254,564	45.7	61.1
More developed regions <sup>1</sup>	882,890	1,014,759	292,150	197,388	75.1	83.7
Less developed regions <sup>2</sup>	1,752,755	4,102,279	2,839,979	3,057,176	38.2	57.3
Least developed countries <sup>3</sup>	138,316	557,663	456,195	709,539	23.3	44.0

<sup>1</sup> More developed regions comprise all regions of Europe and Northern America, Australia/New Zealand and Japan. <sup>2</sup> Less developed regions comprise all regions of Africa, Asia (excluding Japan), Latin America and the Caribbean, and the regions of Melanesia, Micronesia and Polynesia. <sup>3</sup> As of 1995, the least developed countries as defined by the United Nations General Assembly, comprise 48 countries, of which 33 are in Africa, nine in Asia, one in Latin America and five in Oceania.

Source: UN (1997).

The rapid urban population growth in developing countries is firstly caused by the migration into cities. Secondly, it results from an increasing surplus of births over deaths in the urban population. The population of developing countries will further show high proportions of under-20-years-olds until the beginning of the 21st century.

In the developed world, different observations can be made. The phenomenon of an ageing society also has consequences for cities (WHO 1992). However, even if young people do not represent such a large population group in industrialized countries, they are always regarded as the society's future. Society always reacts with special awareness regarding what happens to and with young people.

The urban future of the world with its population dynamics is interrelated with the process of urbanization. Urbanization is a process characterized by plurality, being different in every urban area as well as in every country and region. Nevertheless, there are some common aspects: an increasing number of inhabitants in cities, a concentration and expansion of working places, and the extension of industrialized areas. In contrast to rural areas, the number of inhabitants is so great that establishing and maintaining personal relationships is more difficult and social distance and anonymity are predominant.

In general, social aspects of urban life are ambivalent. On the one hand, it seems that cities pose stress for the individual adolescent identity process, arousing feelings of anonymity, narrow self-interest, and fear. On the other hand, many positive aspects of urban life reflect cultural and intellectual stimulation, personal choice in pursuing various social roles and moral options all of which can promote a healthy life.

The epidemiological picture of urban areas differs between cities of the "First" and the "Third" World and shows intra-urban differences, as well. The "epidemiological transition" characterizes the transition in patterns of health and population from infectious diseases to chronic diseases (Harpham and Reichenheim 1994). In the cities of the Third World – especially in poor areas – people suffer more and more from the worst diseases found in both the First and the Third World.

### **2.1.2 Socio-economic conditions**

Poverty does not only affect the psycho-social health status; being poor also constitutes a de facto risk for violence in most societies. This applies to both absolute deprivation or poverty, and socio-economic inequality (relative deprivation). Studies by Millner (1998), Wilkinson (1996) and in particular those on adolescents carried out by the World Bank

(1997) and James (1995) show that poverty and income inequality are important determinants of violence.

WHO (1998a) states that poor people do not intrinsically tend to act more violently than richer people do. But it is the feelings of inequality poor people bear in combination with frustration, depression and insecurity that cause violent behaviour. Braithwaite and Braithwaite (1980) and Wilkinson (1996) reveal that societies characterized by extreme income inequality show higher homicide rates. Concerning adolescents, James (1995) shows that violent adolescent boys were often violent as small children and that most of their parents felt depressed due to their relative poverty. All these findings indicate that the effects of economic factors are transmitted largely through psycho-social channels. Income differences have widespread psycho-social effects, e.g. in the form of individual stress. It is not only that material factors affect one's well-being and health – psycho-social factors might be of relevance as well.

In a society characterized by status-related social exclusion, aggressive subgroups, being opposed to the rest of society, are more likely to emerge (Wilkinson 1996). The stigmatization of the most disadvantaged is closely related to the extent of income inequality. Income distribution is a basis for processes of social stratification and social distinction in modern societies, which can destroy social capital (Kawachi et al. 1999; Putnam 1993). In this way, high inequality is an indicator of low social cohesion; social cohesion however is a precondition of a stable and "working" society and economy. When the "social fabric is in better condition [...] the society appears more caring" (Wilkinson 1996: 191) which means that social capital (or social cohesion) is high.

These arguments are based on the assumption that social factors matter once countries have passed the epidemiological transition into the pattern of the developed countries (Wilkinson's research is about industrialized countries). Other studies show similar results and conclude the same for developing countries (see World Bank 1997). Particularly relevant to Third World urban areas – places of rapid economic development with high levels of unemployment and lack of education – are the negative effects which inequality has on young people's behaviour (cf. Williams 1998; Millner 1998; James 1995).

Following this argumentation, it is not surprising to find parallels between poor health, emotional problems in childhood, poor educational performance, and violent crime – especially in poor urban areas. Nowhere is inequality more obvious than in cities where the rich and poor live close to each other but are separated for most of their activities. Spatial



and social isolation of the poor is combined with the anonymity of cities, making it more difficult to develop social capital, and creating more vulnerability of young people.

### **2.1.3 Social-cultural factors**

The socio-cultural context in which young people grow up has a profound influence on individual behaviour, i.e. adolescents from distinct socio-cultural backgrounds are influenced by different socio-cultural factors relevant to the occurrence of violence. In this way, societies can have specific cultural values and social norms – for instance, a violent or a sexist societal climate – which more or less advance violent behaviour (cf. Barnett et al. 1997; Steinert 1995; Flisher et al. 1993).

Gender disparities convey stereotyped images of power and dominance of the male, e.g. patriarchy as the "right" to dominate and control women and children (Barnett et al. 1997). Gender inequity is already of importance to adolescents (Flisher et al. 1993), who are in a decisive period of life, as they early learn gender scripts and try to find their own social roles.

Public opinion and researchers, e.g. Wolfe et al. (1997b) and Schwind et al. (1990), see big hazards proceeding from media in modern societies, in particular from violence and brutality shown in TV-broadcasts, video tapes and movies and from the way gender roles are presented. Additionally, the way the media deal with the subject of adolescent violence increases a negative learning process. On the other hand, the media condemn adolescent violence.

Furthermore, it is essential which acts or behaviour society labels "violence". The socio-cultural definition of violence is of special importance to adolescents, because their behaviour essentially orientates by the socio-cultural norms and values in their social environment internalized by adults and peers and passed on through education and legislation. The socio-cultural context is influencing the political-legal conditions as well.

Globally, a culture characterized by the "modern" life style is spreading. It is predominantly and rapidly transferred and internalized by the young people in cities. Even though change of society is something normal (Elias 1969), social changes in the form of modernization and changing life style pose requirements to people, and especially to adolescents (Hurrelmann 1991). This means that modernization is not inherently entailing violence, but it can contribute to it, because it makes adolescents more vulnerable than under stable

conditions. Furthermore, social change can intensify the effects of other factors such as poverty and inequality in a society or in a city (cf. Friedrichs 1983).

#### **2.1.4 Political and legal conditions**

Throughout history and current politics, the societal judgement whether an act is a violent act rather than a tolerable, normal or necessary act, is essential to policy, legislation and criminal law. What a society defines as violence can be quite different in distinct societies (Merten 1999; Harvey 1997) and the same society judges differently under changing conditions (e.g. peace and war). In modern societies, violence is used legally only by the state (Steinert 1995; Elias 1969).

The legal system has consequences for the potential prerequisites of adolescent violence such as the access to firearms and weapons, the use of alcohol and other drugs, as well as the legal classification of adolescent violence. The availability of firearms and weapons plays an important role in the occurrence of adolescent violence in many countries and cities (Krug et al. 1998). The use of alcohol and other drugs is a risk factor for adolescent violence. Law limits the access to alcohol and other drugs for the young people in order to protect them. In many countries, adolescents cannot purchase alcohol and other drugs legally; some states even prohibit any person from using alcohol and drugs.

One of the most important state-influenced preconditions or risk-factors of adolescent violence is the legitimacy of parent-to-child violence. Corporal punishment of children and adolescents is beginning to be prohibited by law in more and more countries. This has emerged from public discussions about what society regards as violence (Lundman 1993).

Furthermore, the state determines how violent acts are legally handled and what consequences perpetrators have to bear. Due to their particular legal status and with respect to their age, especially young assailants are treated differently in many countries.

## **2.2 Local settings affecting adolescent violence**

This chapter describes the importance of different settings, which influence the development of adolescent violence in cities. WHO (1998b: 19) defines a setting as: "[...] the place or social context in which people engage in daily activities in which environmental, organizational and personal factors interact to affect health and well-being."

Settings such as the home, school, neighbourhood and workplace affect the occurrence of adolescent violence. Such settings represent a "mirror" of the process of social change because they are all affected by the macro level and connecting links to the individual level.

Hurrelmann (1994) explains the importance of these settings and the role of the institutions with respect to the young persons' socialization. The settings in which adolescents are involved transmit social norms and communicate the sanctions that determine the incorporation of adolescents into society.

In the following sections, different settings are discussed in which young people are involved and which play an important role for developing either non-violent or violent behaviour. Home, school respectively work place and community are presented in their general functioning for young people with a special focus on urban adolescent violence.

### **2.2.1 The family and the role of parents**

The family is the fundamental unit of all societies. Obviously, the family and parents – or other primary caregivers – play an important role in the development of young people. Some intra-family factors have been identified which affect the probability of adolescent violence: ways of parenting, parent-child attachment, conflict, and violence in the family.

Parental behaviour and family structures are strongly influenced by the macro level discussed in chapter 2.1, which are relevant both to urban and non-urban areas. However, parental stress factors appear stronger in cities than in rural areas. In this way, social change can threaten stability of many families and makes many parents feel ill-equipped to prepare their children for experiences they themselves have never had (cf. WHO 1993b).

The interaction process taking place in families is a further key determinant. Deficits in parenting increase the probability of deviant behaviour during childhood and adolescence. For non-violent adolescent behaviour, a sense of self-control needs to be developed. Together with conform behaviour, self-control is associated with non-violent behaviour of adolescents. In the scientific literature, some parenting styles are identified that hinder forming a sense of control and promote adolescent delinquent behaviour. For instance, families in which disapproval, rejection, low attachment and harsh parenting styles predominate, are unable to adequately socialize their children (cf. Short 1997; Wilkinson 1996). Apart from the educational style, the way the family keeps together additionally affects adolescent violence. Divorce or separation can influence control of impulse, temperament and excessive energy found in children (Wolfe et al. 1997b).

Intra-family violence affects adolescent violence. Until recently, intra-family violence has been an area that was hidden due to social, cultural and legal principles. Though, the home is the place where violence often is experienced for the first time in life and where violent or non-violent behaviour is learned. The family determines attitudes towards violence, transfers values about the legitimacy of violence as way of conflict solution or reaching individual goals (Ohder 1992). Adolescents can learn violent behaviour from their parents through imitating role models; their behaviour is suppressed or reinforced through punishment and rewards (Barnett et al. 1997). This does however not mean that family violence inevitably leads to adolescent violence. Family life is but one of a series of potential factors (Patrignani and Villé 1995).

### **2.2.2 Formal education and peer experiences**

School represents a major source of guidance and education of children and adolescents. Schools are locations where young people obtain knowledge and many personal and social experiences. Schools and other educational institutions can increase the probability of violent behaviour among pupils inside and outside their institution (cf. Ohder 1992; Meier 1997).

In many cities, pupils experience different forms of violence at school: violence against things (vandalism), damaged buildings and furniture predominate. Frequency and forms of interpersonal violence may vary markedly depending on the pupils' age and socio-economic status, form of the school, city and country. For the most part, the following forms of interpersonal violence occur: psychological violence (e.g. bullying), provocation, competition, terror or blackmail, moreover fights and sexual harassment. Violence from teachers is in most cases psychological, but it can also be physical (e.g. corporal punishment). By comparison, violence against teachers is a rare phenomenon (Merten 1999; Meier et al. 1995).

Although violence is not one of most urgent problems at school, it seems to be interrelated with violence at other settings. Of special concern during adolescence are youth groups or cliques as informal (rarely formal) opportunities to meet peers and spend time together. Young people who tend to use violent behaviour have a high affinity to peers and youth groups which likewise behave violently (Funk and Passenberger 1997). These groups tend to consider violent behaviour more or less as part of their group culture.

### **2.2.3 Neighbourhood and community impacts**

In this paper, the terms "community" and "neighbourhood" refer to the physical and social environment shared by a group of people in their everyday life.

Opposite to marginalized and socially disadvantaged neighbourhoods, social environments with low violence rates tend to be socially cohesive communities with a strong community life. Social cohesion is a typical feature of communities that show low social disorganisation, high potentials of social capital (discussed in section 2.1.2), and high social control (Kawachi et al. 1999). The social cohesiveness of communities is determined by the extent of social organization, i.e. communities' and families' competence to socialize and to care for children, the ability to supervise and control adolescents and the existence of informal support and neighbourhood networks.

Social control seems to have a particular influence: Violent crime rates are high in those urban areas where social control is low. Weakened social control contributes to social isolation and lowers the binding character of values and role models that are of particular importance to adolescents to adapt to non-violent behaviour models. The conditions in inner city neighbourhoods and in many disadvantaged areas of the world's cities (cf. section 2.2.1) make it difficult for young people to find positive role models with explicit norms against violent behaviour. Consequently, it becomes more difficult for the cities to uphold the essential institutions of socialization and social control (Wilson 1987). Instead, a loss of social networks and less social integration is observable, promoting violent behaviour which mutually reinforces processes of urban decay leading to further disruption of social integration (Short 1997).

## **2.3 Vulnerability of adolescents at the individual level**

The unit of analysis at the individual level is the person. Former research stressed that young violent people are mainly lacking a sense of justice and education (Kaiser 1959). In recent years, however, it has become clear that delinquent behaviour is associated with quite diverse and complex interrelated psychological, social and biological determinants at the individual level and is not a mental disease. In this context, personality means the way people learn from experience and adapt to their feelings, thoughts, and actions. It is the "[...] dynamic organization within an individual of the psychobiological systems that modulate adaptation to a changing environment. This includes systems regulating cognition, emotion and mood, personal impulse control, and social relations. Personality

traits are enduring patterns of receiving, relating to, and thinking about oneself, other people, and the world as a whole" (Cloninger et al. 1993: 976).

The vulnerability of youth relates to those individual risk factors that increase the likelihood of developing any form of violent behaviour compared to those who do not have such characteristics (WHO 1997c). In respect to the MLIVEA framework, individual risk factors can be regarded as a response to changes in the local setting. The factors involved are complex, far-reaching, and can be classified into the above mentioned psychological, physiological and social dimensions of the individual that are relevant to violent behaviour.

To understand juvenile violence and individual risk factors during adolescence, it is important to see the peculiarities of this age group and why they are especially vulnerable in regard to violence. Adolescence is the time of life approximately between the age of ten and twenty-four. However, the beginning and the end of this phase are determined by biological and social time. This differs from society to society (Siegrist 1995; Hurrelmann 1994; WHO 1993b). Even if socialization is a life long process, the period of adolescence is a key time for developing a sound personality, which in this context also means non-violent personality. Socialization means the process of developing personality by continuously tackling the social and material environment mediated through society (Hurrelmann 1991; 1994). Adolescence is a very vulnerable period of life which strongly interacts with self-concept, self-consciousness, and self-control (Siegrist 1995) and makes the young people be prone to different forms of risk-taking, deviant and delinquent behaviour.

### **2.3.1 Risk-taking behaviour and the use of alcohol**

Adolescence is the phase of life to which "personal experiments" belong to. Young people are more likely to explore and to rebel against their social environment than other age-groups, thus the potential of risk-taking behaviour is greater (WHO 1993a). The concept of risk-taking behaviour or problem behaviour covers similar fields of non-conform respectively non-conventional behaviour, which is often classified as hazardous, unhealthy behaviour (e.g. smoking, risky driving, unsafe sexual intercourse, illicit drug use, problem alcohol drinking and last but not least violence, cf. Jessor et al. 1990).

Risk-taking behaviour during adolescence serves as a means to achieve social status and is part of the development process representing subjective, rational choices of goal-directed behaviour. It is part of the process of individuation and integration which adolescents experience during the time from childhood to adulthood (Hurrelmann 1994).

Research shows that many patterns of risk-taking behaviour are interrelated. This does however not mean that they presuppose each other (Flisher et al. 1996; Kolbe et al. 1993); studies provided evidence that many mediator or intervening variables have to be taken into account that heavily limit validity of common assumptions on cause-effect-relations (Smith 1995; Hurrelmann and Lösel 1990). The form of risk-taking behaviour a young person "chooses" depends on influences of the local setting and macro level. The use of alcohol e.g. is depicted as risk-taking behaviour in more detail, as it is widely regarded as being involved in or preceding violent acts (cf. Short 1997; Flisher et al. 1996; Saner and Ellickson 1996).

According to different studies, between 50% and 80% of violent offenders drank alcohol (Short 1997). Among adolescents, 69% of those committing self-directed violence consumed alcoholic beverages. Associations between the use of alcohol and violent behaviour however are explained quite differently (Zhang et al. 1997). According to Rautenberg (1998), there is even no evidence of a significant relationship between the willingness to use violence, substance use (alcohol, drugs) and delinquent behaviour. He argues that it appears very difficult to make clear statements on causes and effects. Violence and addiction thus do not seem to be causally interrelated; the author assumes that violence rather results from a general "deviant life style". His results support the importance of associations between factors of the individual level, the local setting and macro level.

### **2.3.2 Approaches to social control and self-control**

According to many scientific and philosophical conceptions, all humans possess the capability to violence (Nell 1995). Accordingly, something hinders humans to become aggressive and violent. This is the topic of different control theories of which some focus on characteristics of external formal (e.g. police and legal systems) and informal social control (e.g. family and community). Others moreover consider forms of internal control, e.g. one's conscience and social bonds (Eisner 1997; Short 1997).

Following this approach, lacking predisposition to self-control which should have been established at childhood, can easily lead to delinquent and violent behaviour during adolescence. In the context of youth violence, particularly Hirschi's theory of control (1969) has been seriously taken into account. This theory focuses on central elements promoting non-deviant behaviour: attachment to parents or to other important persons, commitment to goals, norms and values, and involvement in social activities. It is easy to anticipate that due to certain detrimental living conditions prevailing in urban areas, children and

adolescents are not able to develop social bonding and to internalize social control at the individual level.

The mechanism of establishing self-control is a good example of the interrelationship of the different levels of the MLIVEA framework. Determinants of the macro level e.g. have an impact on external control e.g. in the form of supervision of young people's activities or laws on juvenile delinquency (cf. section 2.3.3). They create conditions under which parent-child-relationships are weakened at the local setting which consequently limits opportunities for bonding and monitoring (cf. section 2.3.1).

### **2.3.3 Violent experiences and witnessing**

Forms of violence against children are manifold, ranging from harsh disciplinary practices and corporal punishment to child maltreatment and abuse. Furthermore, children experience forms of non-domestic violence including political violence and war. Millions of children and adolescents in many cities of the world also grow up as street children under battlefield-like living conditions, a life which is exposed to many forms of violence.

Young abused persons frequently exhibit poor capabilities in school and at workplace. They perceive themselves as powerless and tend to blame themselves for their victimization experiences. Long-term abuse is often accompanied by depression, self-directed violence (suicide), substance abuse, psychosomatic complaints, and inability to develop intimate relationships. Young victims or witnesses are more likely to show symptoms of psychological problems (e.g. post traumatic stress disorder, PTSD), and they more often tend to use violent behaviour when grown older (cf. Barnett et al. 1997; Wolfe et al. 1997a).

Moreover, a young person who witnesses or becomes a victim of violence not only gets physically and psychologically hurt. Experiencing or witnessing violence is part of the intergenerational cycle of violence, i.e. the transmission of violent behaviour from one generation to another (Mercy et al. 1993). Once a child starts to see the world as hostile, he or she learns scripts and schemes of aggression, and believes that violence is acceptable.

### **2.3.4 The biological perspective**

Determinants of adolescent violence at the individual level referring to biological aspects range from genetic to neurobiological "traits". However, studies suggest that biological factors may be moderated by social factors as a consequence of macro level-influences.



Therefore, Brennan et al. (1997: 169) see adolescent violence as "a transactional, developmental process in which biologically vulnerable individuals find themselves ensnared in social environments which do not alleviate their vulnerabilities, but rather exacerbate them. This developmental process is reflected by a lifetime characterised by aggressive, criminal, and often violent behaviour."

Genetic factors may largely give rise to biological risk factors (Raine et al. 1997). However, research done in this field very often focuses on aggression or violence of non-human species, and it is fairly questionable if findings of such studies are generalizable to humans. This also applies to cytogenetic, twin and adoption studies. Even if one accepts these limitations, there is only weak evidence that genetic factors are directly responsible for adolescent violence (Volavka 1995). Neuropathology may be considered a "necessary" but not "sufficient" preceding condition for the occurrence of adolescent violence. As Short (1997: 153) sums up, "neurochemical mechanisms clearly are involved in violent behaviour, but the relationships are empirically complex and poorly understood."

Biological as well as social risk and protective factors are the centre of interest of the bio-psycho-social model. Both forces of the social environment and the individual may directly promote or prevent violent acts and are interrelated (cf. Raine et al. 1997; Steiner et al. 1997). Raine et al. (1997: 14) say that "environmental forces can give rise to the expression of a latent genetic trait (e.g. poor social environment magnifying genetically predisposed low IQ), while genetic factors can alter the social environment (e.g. low IQ individual drifts into more criminogenic environments)." However, social, biological and psychological factors rarely are simultaneously tested to discover their relative contributions to the occurrence of adolescent violence.

### **3 Surveillance of violence and health**

In this chapter, different types of violence and the most important violent acts affecting adolescents are addressed (section 3.1). After that, methods of surveillance of violence-related health effects are discussed (section 3.2). Chapter 3.3 outlines trends of mortality and morbidity due to violence in different countries.

#### **3.1 Typology of adolescent violence**

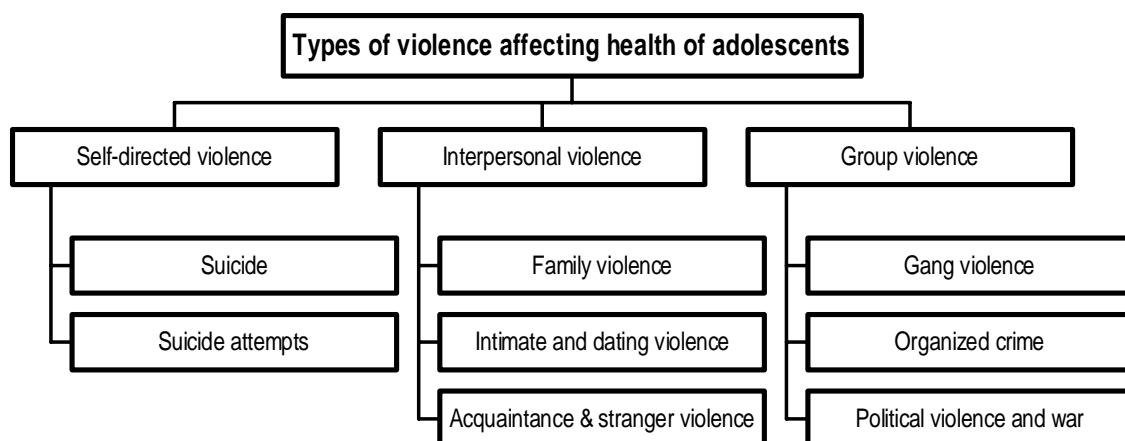
There is no world-wide, standardized classification of violence yet, let alone of adolescent violence. Nevertheless, available definitions and explanations used in scientific research are helpful to provide a comprehensive description and understanding of adolescent

violence in cities. WHO (1998a) categorizes violence into different types and contexts in which violent acts occur:

- *The nature*: active physical violence (such as assault); passive physical violence (such as negligence); verbal or psychological violence; sexual abuse;
- *The perpetrator*: self-inflicted violence; interpersonal violence; organized violence, often against and by groups;
- *The setting*: family violence, in the nuclear or extended family; institutional violence, occurring at school, children's homes, health institutions, workplaces etc.

Figure 4 gives an overview of types of violent acts in which young people are involved either as perpetrator or as victim.

**Figure 4: Types of violence affecting the health of adolescents**



Source: Jordan (2000).

The term *interpersonal violence* relates to any type of violence that involves more than one person. It is used to demarcate some acts of adolescent violence from forms of violence used by groups in public (cf. WHO 1998a; World Bank 1997). According to the victim-offender-relationship, interpersonal violence can be categorized into family violence, intimate and dating violence, and acquaintance and stranger violence.

In many cities of the world, *group violence* constitutes an essential type of adolescent violence. In general, group violence is planned to achieve or motivated by specific social, political or economic objectives of an organized social or political group (WHO 1998a). Youth groups are common phenomena in many countries and are easily associated with violent gangs, though not all of them commit crimes. Youth groups and gangs may show

many forms of formal and informal organization (World Bank 1997). In many cities, dealing with gangs is an important step forward solving the problem of adolescent violence. However, not all groups which commit violent crimes are organized.

*Self-directed violence* is defined by WHO (1998a: 9) as "encompassing those intentional and harmful behaviours directed at oneself, suicide representing the most severe type. Other types include attempts to commit suicide and behaviours where the intent is self destructive, but not lethal (e.g. self mutilation)."

Self-directed violence particularly seems to be related to rising unemployment, and in most countries, it appears that there is an inverse relationship between suicide and homicide rates. "The implication is that whether the anger goes inwards or outwards, whether you blame others or yourself, is affected by the social context" (Wilkinson 1996: 162-163).

### **3.2 Surveillance of violence-related health effects**

To know more about the health effects of adolescent violence in cities, it is necessary to systematically collect data on the problem. This method is called "epidemiological surveillance", defined as "the ongoing, systematic collection, analysis, and interpretation of data (e.g., regarding agent/hazard, risk factor, exposure, health event) essential to the planning, implementation, and evaluation of public health practice, closely integrated with the timely dissemination of these data to those responsible for prevention and control" (CDC 1999).

Surveillance is the first step in the "public health prevention cycle" as described in section 1.3. By means of epidemiological surveillance, we get more knowledge of the extent, forms and causes of adolescent violence and its health consequences in a city in order to implement prevention measures.

In the MLIVEA framework, surveillance is the link between actual violent acts committed by adolescents and the action for prevention and intervention. That is, preventive and interventive action to be taken should be developed on the basis of surveillance. The overall aim is to reduce adolescent violence in cities and, consequently, to improve health. For this purpose, data on adolescents' actual violent acts should be collected.

Health effects of violent acts cannot be easily assessed and measured; until today, they are poorly documented and underreported. Mortality statistics are the most readily available information for monitoring trends and making comparisons of homicide and

suicide rates within and between countries. However, a great part of the problem is not reflected in mortality rates. Violence-related deaths e.g. may be hidden in mortality statistics, when such deaths are erroneously recorded as or attributed to accidental injuries. In surveys moreover, denial of response is a frequent problem, particularly when sensitive topics (e.g. family violence) are studied. Hence, available data often mirror only the tip of the iceberg (cf. WHO 1997c; 1998a). Allen (1998) estimates that the level of actual violent acts is four to five times higher than reported.

There are different methods to collect data on adolescent violence in cities and its health consequences (Barnett et al. 1997): *Official estimates and records* reflect rates of violent incidents reported to the police and public social service agencies such as schools and hospitals. Another source of information are city-wide (or nation-wide) *self-report surveys* by using phone, mail or face-to-face interviews. For example, the Conflict Tactics Scales (CTS) developed by Murray Strauss is the most used questionnaire to get valid data in ordinary clinical research interviews. *Victimization surveys* are mail, telephone, or face-to-face surveys of victims. They are particularly useful for studying forms of violence like date rape, when victims may hesitate to speak to the police but may be willing to give information about the violent act in an anonymous interview. *Informant reports* finally are mail, telephone or face-to-face surveys of observers (e.g. parents) and witnesses of violent behaviour. The persons directly involved (i.e. victims and offenders) are not surveyed for informant reports. To sum up, none of the methods is superior to the others and each has advantages and disadvantages.

National differences in reporting and classifying violent acts are a grave obstacle to international comparative studies. In most cities of the world, representative surveys on adolescent violence are almost impossible to conduct due to lacking financial resources and sensitiveness of the topic. In order to solve the problem, WHO has initiated the development of an International Classification of External Causes of Injuries (ICECI) (cf. WHO 1999).

### **3.3 Adolescent mortality and morbidity due to violence**

The individual health consequences of violence depend on the kind, the scale and the context in which the violent act occurs. Violence can lead to health consequences such as: head and spinal cord injuries, bruises, cuts, neurological symptoms such as hearing and visual loss, headaches or numbness. Violence also causes profound psychological and psychosomatic symptoms characterized as post traumatic stress disorder (PTSD).

Repetitive violence (e.g. domestic violent acts) can have strong effects on psychological well-being. Victims of intimate partner or dating violence have a greater risk of depression and self-directed violence. Further consequences are lowered self-esteem, anxiety, alcohol and drug abuse (WHO 1998c).

There are only a few international studies comparing data on adolescent mortality or morbidity. More than 15 years ago, WHO started an international longitudinal survey on health behaviour of school aged children (HBSC) in 22 European countries, including violent behaviour (Mansel 1995). However, the HBSC-researchers did not collect mortality and morbidity data. Their findings revealed that adolescent violence resulting in nonfatal injuries is highly prevalent among school children across all countries. Being involved in violent incidents means to be very likely to get injured (Harel et al. 1998). Furthermore, Seidman et al. (1998) show that young people in the middle adolescence reported higher levels of antisocial behaviour than those of younger ages. Younger adolescents are more likely to become victims, and males are at greater risk to be involved in different kinds of violent situations than females (cf. WHO 1998a; Flisher et al. 1993).

WHO also estimates that the leading causes of mortality during adolescence are non-natural. Although violence is underreported, it ranks behind accidents as a leading cause of death in many countries. Among young people, 20%-60% of deaths or more are due to accidents, with developed countries showing the highest proportions. Deaths from self-directed and interpersonal violence, which have been increasing over the past decades in developed countries, may be added to these numbers (WHO 1993b; 1998a; 1998c).

In an international study, Jeanneret and Sand (1993), using mortality and morbidity statistics, give an overview of trends of adolescent violence in 20 countries. Due to different data sources and methods however, the data did not permit direct comparisons of the countries' mortality rates. In consequence, the authors roughly exemplified trends of violence rates in various countries. Table 4 shows the main results.

The authors conclude that adolescent violence is rising in many developing and developed countries. In almost all countries included in this study, occurrences of intentional violence reaches worrying proportions in adolescence (15-19 years) and is considered to be increasing among young adults (19-24 years). The extent of the problem is relatively well known thanks to national mortality rates. "The relative proportions of murders and suicides vary considerably from one country to another, though they remain fairly constant over

time, whether the diachronic progression of mortality due to intentional violence increases, remains stable or falls in the country concerned" (Jeanneret and Sand 1993: 49).

**Table 4: Trends of adolescent violence in selected countries**

Country	Male adolescents		Female adolescents	
	15-19 yrs	20-24 yrs	15-19 yrs	20-24 yrs
Australia	↗	↗	↗	↗
Canada	↗	↗	↗	↗
Chile	→	→	→	↘
England / Wales	↗	↗	→	→
Greece	→	→	↗	↗
Guatemala	↗	↗	↘	↗
Hungary	↘	↘	↘	↘
Hong Kong	→	↗	↗	↗
Ireland	↗	↗	↗	↗
Italy	→	↗	↗	↗
Japan	↗	↗	↗	↗
Mexico	↘	↘	↘	↘
Northern Ireland	↗	↗	→	↗
Norway	↗	↗	↗	↗
Poland	↗	→	→	→
Portugal	→	↗	→	→
Scotland	↗	↗	↗	↗
Singapore	↗	→	→	→
Spain	↗	↗	→	→
USA	↗	↗	↗	↗

↗ increasing trend; ↘ decreasing trend; → stable trend

Source: Jeanneret and Sand (1993: 34).

Additionally, in most countries suicide ranks behind accidents as a leading cause of death among young people. Young men commit suicide more frequently than girls who, however, commit suicide attempts more often (WHO 1993b).

#### **4 Prevention: actions for breaking the cycle**

The following section gives an overview of specific measures that can be taken at the macro level, the local setting, and the individual level to reduce violence. Some of the proposals do not only refer to adolescents, but to all age groups. In general, the more

levels the respective measures refer to, the better the chance to reduce violence and to break the cycle of violence.

#### **4.1 Macro level initiatives**

At the macro level, international and national steps can be taken. International agreements and initiatives contribute to violence reduction through intersectoral approaches. WHO should assume a leading role in violence prevention and adopted a resolution on violence prevention to urge member states to address violence as a public health issue. (WHO 1997a; 1998a). There is a relation between social sustainable development and violence, which is reflected in international policies for equality and human rights. The fight against inequalities is a major step towards reducing violence which is already addressed in the World Summit for Social Development (1996).

Long-term strategies such as employment opportunities, job training and fair working conditions and wages are frequently mentioned as necessary economic initiatives to control violence and crime, especially adolescent violence. Politicians and urban planners are responsible for planning and implementing such local economic development programmes.

Part of national plans should be the reorientation of the health system and the health services to define violence as a public health issue. Health workers are regularly among the first persons who come into contact with victims of violence, and they have a unique potential in the community to help those at risk.

Through adults, adolescents are being assigned to a specific social, political, economic and legal status. Obviously, youth violence has an own quality and has to be considered a typical form of juvenile delinquency which is often attributable to age-specific risk-taking behaviour. In jurisdiction, youth and adult violence should therefore be judged and treated differently: Educational endeavours should be given priority over punishment and deterrence. The introduction of a juvenile justice system can offer different adequate entry points for prevention and control.

#### **4.2 Different settings: action taken at the local level**

At the city level, different local settings are a good starting point for taking action. Especially integrated intersectoral approaches and measures to overcome intra-urban differentials in

socio-economic living conditions should be considered to solve urban health problems (Stephens 1995).

Experiences with school programmes show that schools offer efficient and practical means to prevent and reduce violence. Particularly evaluations of school-based anti-violence trainings and other measures reveal promising results. Schools can create public policy that promotes health, develops skills, reorients health services, develops supportive environments and mobilizes community action (WHO and UNESCO 1998). In collaborative community-wide activities and projects, adolescents learn social skills to change community norms and barriers which cause violence. Schools certainly cannot control many factors that contribute to violence. However, they can address a broad range of behaviours, communication patterns, skills, attitudes and school conditions that support and perpetuate violence (WHO and UNESCO 1998).

Community and neighbourhood initiatives are another way to involve civil society and non-governmental organizations. Moreover, it is the responsibility of urban planners to exchange with at-risk populations in their communities, and they should take into account crime reduction activities as part of their routine planning duties (Rycus 1998). Such special possibilities of the city government to tackle violence are particularly demonstrated in the Healthy City approach of WHO and the Safer Cities Project of the United Nations Centre for Human Developments (HABITAT) (Vanderschueren 1998).

Further steps which could be implemented by municipalities are security system improvements and local zero-tolerance policies. The city government also could offer design guides for physical security devices (e.g. illuminated public spaces, "open" and "friendly" architecture, video control of public places and private properties) that may prevent and reduce (not just displace) crime without necessarily giving rise to a "siege mentality" (Rycus 1998).

### **4.3 Measures at the individual level**

At the individual level, a comprehensive support programme for victims is required, including training of police and counsellors as well as establishment of emergency and rehabilitation services (Wolfe et al. 1997b). Particularly the concept of resilience and the promotion of protective factors play an essential role. The concept of resilience refers to "[...] the capacity of a child, a person, a family, a group, not only to resist adverse events but also to build up a strong and emphatic personality or behaviour" (WHO 1997c).



Resilient adolescents show social competence despite the presence of adverse conditions e.g. in the form of social, psychological or biological shortcomings. Protective factors range from genetic-constitutional determinants, personality dispositions, social support in the family and peer groups, to institutional and to some degree societal factors (cf. Lösel and Bender 1997; Lösel 1994).

To promote prosocial attitudes, adolescents should be reached with preventive measures and activities such as parenting education, public information and education campaigns (WHO 1998a); in other words: It appears necessary to implement actions at all levels of the MLIVEA framework, i.e. the macro level, the local setting, and the individual level.

## **5 Conclusions**

The idea of this paper was to give insight into the problem of adolescent violence in cities. For this purpose, a new comprehensive framework has been applied. The MLIVEA framework shows that different interrelating factors of the macro level, the local setting, and the individual level can result in urban adolescent violence. The advantage of the new framework is the presentation of the whole process and the interrelationship of factors conducive to adolescent violence, and it also shows where further research is needed. The framework could serve as a starting point for decision-makers to collect indicators and data on adolescent violence in cities, and to develop preventive and interventive measures.

To know more about the health effects of adolescent violence, it is necessary to systematically collect data on the problem. Surveillance is the first step in the "public health prevention cycle". Through epidemiological surveillance, we get more knowledge of the extent, forms and causes of adolescent violence and its health consequences in a city in order to carry out prevention programmes. Disaggregated data on the city level would be best for surveillance – however, such data are hardly available. Instead, researchers often focus e.g. on a specific school or the whole country.

Through methods of public health research, the problem and the underlying factors can be made visible to demonstrate that violence is not inevitable. The various disciplines of public health approaches can effectively contribute to uncovering the different causes leading to adolescent violence in cities, and to developing different measures of primary, secondary and tertiary prevention.

The relevance of public health intervention particularly becomes clear if one considers that young people are the future of society. Different actions can be taken to reduce violence at the macro level, the local setting, and the individual level. In general, the more levels the respective measures refer to, the better the chance to reduce violence and to break the cycle of violence. Therefore, a comprehensive public health approach is needed that decisively promotes sustainable development of societies.

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