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GUEST EDITORIAL

Public Health and Peace

Ulrich Laaser, Dončo Donev[1], Vesna Bjegović[2], Ylli Sarolli[3]

Section of International Public Health, Faculty of Health Sciences, University of Bielefeld, Bielefeld, Germany; [1]Department of Social Medicine, School of Medicine, St. Cyril and Methodius University, Skopje, Republic of Macedonia; [2]School of Medicine, University of Belgrade, Belgrade, FR Jugoslavia; and [3]Department of Public Health, Faculty of Medicine, University of Tirana, Tirana, Albania

The modern concept of public health, the New Public Health, carries a great potential for healthy and therefore less aggressive societies. Its core disciplines are health promotion, environmental health, and health care management based on advanced epidemiological methodologies. The main principles of living together in healthy societies can be summarized as four ethical concepts of the New Public Health essential to violence reduction – equity, participation, subsidiarity, and sustainability. The following issues are discussed as violence's determinants: the process of urbanization; type of neighborhood and accommodation, and consequent stigmatization; level of education; employment status; socialization of the family; women's status; alcohol and drug consumption; availability of the firearms; religious, ethnic, and racial prejudices; and poverty. Development of the health systems has to contribute to peace, since aggression, violence, and warfare are among the greatest risks for health and the economic welfare. This contribution can be described as follows: 1) full and indiscriminate access to all necessary services, 2) monitoring of their quality, 3) providing special support to vulnerable groups, and 4) constant scientific and public accountability of the evaluation of the epidemiological outcome. Violence can also destroy solidarity and social cohesion of groups, such as family, team, neighborhood, or any other social organization. Durkheim coined the term "anomie" for a state in which social disruption of the community results in health risks for individuals. Health professionals can make a threefold contribution to peace by 1) analyzing the causal interrelationships of violence phenomena, 2) curbing the determinants of violence according to the professional standards, and 3) training professionals for this increasingly important task. Because tolerance is an essential part of an amended definition of health, monitoring of the early signs of public intolerance is important. The vital interplay between the informed public and efficient administration, however, can only exist in an open society. The link between democracy and health of the people, and between public health and economic welfare is real. The Public Health Collaboration in South Eastern Europe (PH-SEE) evolved just in time to reconnect and strengthen disrupted professional networks in the region as a prerequisite of effective public health action.

Key words: *anomie; cost of illness; human rights; public health; social justice; violence*

Rise of Violence

There has been a threatening increase in the incidence of violence in many parts of the world, especially during the last decade (1,2), ranging from domestic forms of violence, as is the case of many violated women in rural parts of India and Pakistan (3), up to the horrifying example of the recent terrorist attack on the World Trade Center in New York on September 11, 2001. War and violence, as causal factors of increasing burden of disease and injury, are estimated to rise from the 16th and 19th position in 1990 to the 8th and 12th position in 2020, respectively (Fig. 1 and ref. 1). It is unquestionable that violence is becoming a modern epidemic that takes a high toll on people's lives and health. It has become an issue on which health sciences should focus and its prevention has become the greatest challenge facing public health professionals (2,4,5). The research of ecological, social, and individual determinants of violence leading to appropriate intervention is one of the most intricate problems of our times.

In this situation, Europe, and particularly the European Union, seems to be an island of relative prosperity and peace (6). But still, the self-content Western Europe is confronted with at least three dominant problems: 1) social tension and eruptions of violence related to immigrations (7); 2) socio-political consequences of disintegration of the former Soviet-Union (8) and South Eastern Europe (accompanied with the wars in former Yugoslavia, refs. 2,9); and 3) the Middle East conflict (10,11) and a continuing decline of "the lost continent", Africa, with even more catastrophic prospects, such as it was the emergence of HIV in the past.

It was stated in the mission statement of the recent conference on Public Health and Peace in Skopje,

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

Figure 1. Disease burdens based on DALYs (disability adjusted life years) of 19 leading causes of death in the world, 1990 and 2020. Modified with permission after Murray and Lopez (1).

Macedonia (12,13), that 90% of the victims in modern wars are civilians. Conflict and war produce specific risk groups, such as refugees and prisoners of war, in addition to vulnerable groups of women, children, and the elderly, and the special risk groups of technologically and drug dependent patients (intensive care, dialysis, incubator, radiotherapy, and chemotherapy). Moreover, war always causes mental health damage with long-term outcomes (12,14-17).

Promise of New Public Health

The modern concept of public health, the New Public Health (18), has a great potential for creating healthy and therefore less aggressive societies. New Public Health covers not only the classical hygiene and the epidemiology of the infectious diseases, but also well-known chronic disease risk factors, such as malnutrition, physical inactivity, and smoking (19). Modern times also give ample evidence that health of the people in general is determined by socio-political conditions, such as poverty, inequity, marginalization, and isolation (20), as well as violence, humiliation (21,22), and psychological traumas (10,11,14-17).

Health promotion, environmental health, and health care management based on advanced epidemiological methodologies have become the core disciplines of modern health sciences and the New Public Health. If their task is to improve and protect the health of the population, any narrowness in approach or academic or disciplinary fencing must disappear (23). In the focus of professional deliberations there should be not only man-made (and natural) disasters, but also their causes (24), modifying determinants (25-31), and coping mechanisms (11,14-17,32).

Public health professionals have to take care of their populations (2). They are entrusted with all aspects of health, which, in terms of the New Public Health, influences all aspects of life (18). Certainly, their task reaches above the immediate medical system. We have learned from the late English cardiologist and epidemiologist Geoffrey Rose that – as he put it – the tail belongs to the body of a distribution, ie, extreme phenomena are determined by the average experience (33). According to Rose, the general level of aggressiveness in a society is related to the phenomenon of extreme violence.

Even half a century after World War II and a decade after the fall of Berlin wall, the physical, mental, social, and spiritual wounds of the war and its atrocities have still not healed (10,32,34), neither in personal biographies nor in many of the European societies in general. The public health, as an academic science, was destroyed in Germany in the Nazi period, when most of its representatives went abroad or were sent to the concentration camps. It was re-established only half a century later, when the first German School of Public Health was re-opened in 1898, in Bielefeld (35).

Public Health Ethics

When the East German upheaval started, a sentence of Rosa Luxemburg, German socialist of Polish origin, who was murdered in Berlin in 1919, became very relevant (36): "Freiheit ist immer nur Freiheit des anders Denkenden" (Freedom is always only the freedom of the one who thinks differently). What she expressed after World War I, Europe finally learned after World War II (37). The principles for living together in healthy societies have finally been developed. They can be summarized as four ethical concepts of the New Public Health, which are essential to the reduction of violence – equity, participation, subsidiarity, and sustainability (18).

Equity

A long and healthy life is at the top of the agenda of almost each individual and, when some gradient in socio-economic welfare is given, equal chances may stimulate dynamic development. Inequity in health is considered to be unfair and unjust, unnecessary and avoidable (38). It causes social tension and thereby interferes with the economy (39). Furthermore, incapacitated individuals cannot fully participate in deciding on social issues and, consequently, in deciding on the issues that concern their private lives. In the European tradition, solidarity with the disadvantaged has been considered a moral value since the Middle Age, in the French revolution ("Liberté, Egalité, Fraternité"), and in the modern European states of welfare, including the original intentions of philosophers

like Marx and Engels. With regard to this European heritage to think of health as a personal good but under individual as well as collective responsibility (40), there is an increasing urgency to reconsider the existence of social differences and their relevance to health. The interdisciplinary study of the determinants and possible interventions to minimize health inequities may be termed Social Public Health (41).

Participation

Collective responsibility must not interfere with individual autonomy (42). The principle of how to solve this apparently antagonistic statement is explained by the term of participation, as coined by the World Health Organization (WHO) (43): participation in the social decision-making processes, which defines our social and physical environment and therewith our conditions of living. The formation of the "settings" (44) we live in is to evolve in as much "bottom-up" direction as possible, or in other words, in a most democratic way. This is expressed in self-help movements and recent community organization through the inauguration of round tables and communal health conferences, including all interested institutions, organizations, groups, parties, and individuals (2,18).

Subsidiarity

The principle of subsidiarity has been invented as a concept in the Catholic social doctrine by the late Jesuit Nell-Breuning (45) and became a dominant principle of the European unification process. It is meant to protect against preponderance of higher hierarchical levels and, in consequence, to refer decisions as much as possible to regional and local bodies. Subsidiarity is equally related to social welfare. As it is stated in the Maastricht Treaty (46), gradients in the quality of life between the regions of Europe must be compensated (9), so that the living conditions are comparable and similar all over Europe. A causal approach aiming at the direct reduction of social gradients reaches above the immediate health activity (9,42). Therefore, the article 129.1 of the Maastricht Treaty adduces that health protection requirements form a constituent part of the Community's other policies.

Sustainability

The fourth ethical concept of relevance concerns sustainability, ie, refers to the development, which should ensure that the current use of resources do not compromise the health of future generations (47). This is especially relevant to countries with economical difficulties, such as postcommunist countries in transition. The network developing on Public Health Collaboration in South Eastern Europe (PH-SEE) seeks the binding agreements regarding the mutual acknowledgment of study, certificates, and the institutionalization of public health training and research in regular schools of public health (48).

Genesis of Violence

The following interrelated dimensions are discussed in the scientific literature as the determinants of violence (49): the process of urbanization; type of neighborhood and accommodation, and consequent stigmatization; level of education; employment status; socialization of the family; women's status; alcohol and drug consumption; availability of firearms; religious, ethnic, and racial prejudices; and the last but certainly not least – poverty (20), especially the so-called relative poverty (21).

Harlem Gro Brundtland, general director of the WHO, has initiated the reversal of an old paradigm (39): "Most experts have so far agreed that the economy is conditional on health; more and more it becomes clear, however, that a sound economic development is not possible without a healthy population. With regard to this, it is obvious that the development of the health systems has to contribute to peace, since aggression, violence, and warfare are among the greatest risks for health and economic welfare. Its contribution can be described as the unfolding of the four following qualities: 1) full, indiscriminate access to all the necessary services, 2) monitoring of their quality, 3) special support for vulnerable groups, and 4) constant scientific and public accountability reached by the evaluation of the epidemiological outcome. This is the message from the Dubrovnik Pledge (50,51) and the Ohrid Declaration (52) in 2001.

Violence is a very complex phenomenon that has profound socio-psychological, socio-economical, and socio-political consequences in each society. Nevertheless, the attempts of the public health to explain the multidimensional determinants of violence are rare, and research of the links between violence and health can be clearly considered neglected. Cornelius-Taylor (49) has attempted to assemble all related phenomena (Fig. 2).

In addition to the interpersonal (including domestic) and self-directed violence, organized violence is a type of violent behavior planned by political or social groups to gain social, economic, or political advantage. It includes war and all other similar military actions (2), as well as any violent political uprising, street fights, and fights among street gangs (49,53). Political violence comprises all acts of violence aimed against or executed by a certain state, including uprisings, rebellions, revolutions, assassinations, and violence against civilians and prisoners, e.g., in concentration camps, or torturing, etc (53). Acts of violence, belonging to the category of communal and ethnic violence, stem from ethnic, religious, and similar conflicts among diverse groups. Criminal violence refers to wanton acts of destruction, armed attacks, bodily injuries, brawls, and murders committed by individuals or groups. The background of these acts of violence can be various. However, as a rule, they mirror the alienation and the disruption of the moral rules in society. Wayne (54) postulated already in 1969, that the breakdown of the primary group creates cultural conflict for migrants,, which leads to disorientation and in consequence "normlessness", and finally ends up in the integration into radical movements, followed by acts of violence to improve the desperate situation. In a society characterized by status-related social exclusion, aggressive subgroups opposed to the rest of society are more

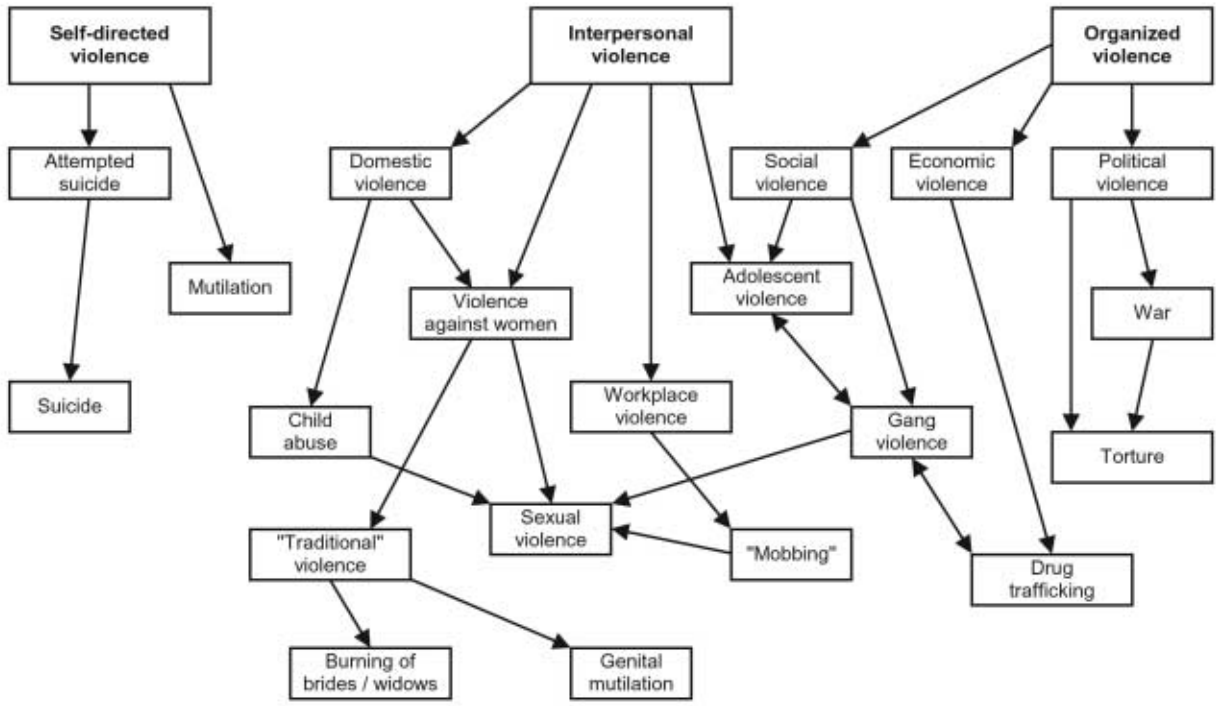

Figure 2. An overview of types of violence (19).

likely to emerge (55). The stigmatization of the most disadvantaged is closely related to the extension of incoming inequality (20). Incoming distribution is a basis for processes of social stratification and social distinction in modern societies, which can destroy social capital (56,57).

According to the extensive literature review in 2002 by Cornelius-Taylor (49), violence in individual lives can also destroy, or at least severely damage, solidarity and social cohesion of such groups as families, teams, neighborhoods, and other social organizations. French sociologist Emile Durkheim (cf. 58) coined the term "anomie" for this phenomenon – a state in which social disruption of a community results in health risks for the individual. In the presence of violence, people no longer feel safe to leave their homes, are more frightened in the streets, and are increasingly concerned about their neighbors' intentions and behaviors. Social withdrawal, ie, increasing isolation, is the most usual response to violence in communities. As people are afraid of violent attacks, they try to protect themselves and their children by avoiding contact with others. The cumulative effects of violence consequently result in an increased anomie, characterized by prejudices and absence of solidarity, mutuality, and joined activities. Anomie also includes feelings of alienation, powerlessness, hopelessness, and an aversion to dealing with uncontrollable events (58).

Public Health Interventions against War and Violence

Almost every study focusing on the consequences of violence on health refers to physical trauma in terms of the high injury and mortality rates, mostly to delineate the effects of violence. Apart from visible physical effects of violence, many victims also suffer from psychological and emotional disorders generally known as post-traumatic stress disorder (PTSD) (16). PTSD is a complex of symptoms comprising several psychological and psychosomatic disorders, which, as a consequence of a life-threatening experience, lead to feelings of fear, helplessness, and horror in victims and/or other persons involved. Such traumatic experiences include war and captivity, violent personal attacks, abduction, torture, and also natural disasters, serious traffic accidents, and the diagnosis of a life-threatening disease (16,59).

A survey of Thyen et al (60), showed that 85% of 263 neglected and abused children and youths from the Gaza Strip displayed signs of stress and/or emotional trauma. More than one third of these children and adolescents showed significant behavioral disorders, 55% suffered from disorders in social and emotional development, and a further one third displayed slow development or educational handicaps, as well as disorders in development of speech. Affected children mostly attract attention through negative behavior. They are frequently involved in violent incidents in kindergarten, at school or in the streets (14,15).

Isolation, alcoholism, criminal behavior, low self-esteem or self-destructive behavior in adulthood can have its roots in psychological and physical violence in childhood. A grievous problem with emotional trauma is that they cannot be recognized as easily as physical wounds, fractures or scars. The pain is hidden and often suppressed and negated for years. Yet, it is real. Most victims seek medical assistance for these symptoms, but not assistance in treating the fundamental problem. This is the reason why medical

and psychological interventions can only be of little effect in the long run. Furthermore, treating today's victims may decisively help to prevent them from becoming tomorrow's offenders, especially in the cases of abuse of children (61).

Scientific intervention is to be based not only on good will, but essentially on reproducible evidence. A very operational model has been developed by Jordan (62), based on the so-called DPSEEA (driving force, state, pressure, exposure, and effect) framework, as originally proposed for environmental health (63). Using the example of adolescent violence, this model links the cause, effect, and intervention (Fig. 3).

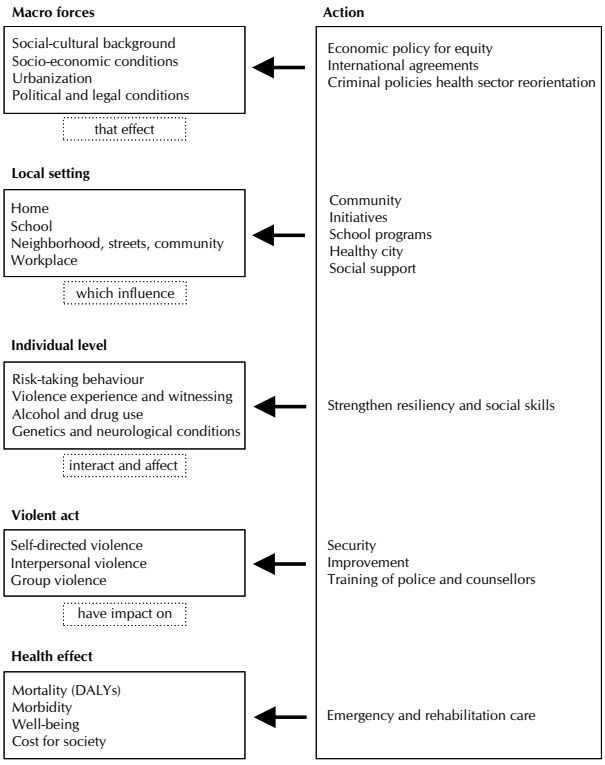

Figure 3. The MLIVEA Model (Macro forces, Local setting, Individual level, Violent act, health Effect, and Action) (30).

Health professionals can make a threefold contribution to violence prevention: 1) analyze the causal interrelationships of violent phenomena in a scientific way, 2) curb the determinants of violence according to professional standards, and 3) train professionals for this increasingly important task profile (64). At the conference in Skopje (12), comprehensive responsibilities were defined as follows: "It is necessary for health, human rights and humanitarian organizations to organize, coordinate and take more effective actions to prevent or stop conflict as well as mitigate all aspects of humanitarian catastrophe. If prevention fails, they must perform their mission and carry out their responsibilities while conflicts last and after, during rehabilitation and renewal". Their purpose is to enable evidence-based policy of "vulnerability reduction" as a commitment according to the Declaration of Skopje (13,65).

In the same context, "Health and Peace" should become a new discipline of health sciences (66). However, the more complex an issue is and rooted in the deeper layers of the individual and collective sprit, the less effective is the administration having a top-down approach (67). It is the public information and debate that are required to transform deeply rooted fears, prejudices, and habits into lasting support of rational decision-making (Fig. 4).

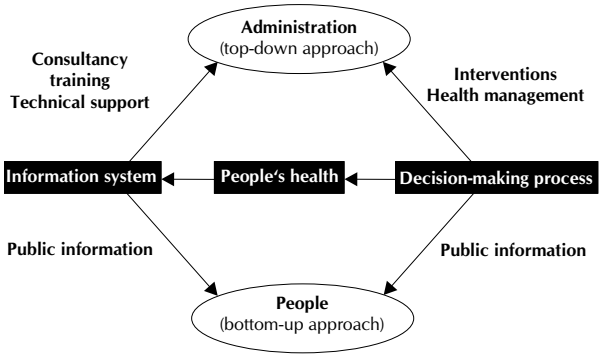

Figure 4. An operational approach to improve the health of people (35).

The first proposal to improve the reliable information for a generation is outlined in this volume by D. Bardehle (29). S. Lang (2,4,5,37,68-70) has suggested the installment of hate-watching groups to monitor early signs of public intolerance, for tolerance is an essential part of an amended definition of health. The vital interplay between informed public and efficient administration, however, can only evolve in an open society. The link between democracy and the health of the people, between public health and economic welfare, between the four ethical principles of equity, participation, subsidiarity, and sustainability, and good governance is real. For professionals working in the field of the New Public Health, it must not be a neglected issue. PH-SEE (48) evolved just in time to reconnect and strengthen disrupted professional networks in the region as a pre-requisite of effective public health action.

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Correspondence to:
Ulrich Laaser
Section of International Public Health
Faculty of Health Sciences
University of Bielefeld
PO Box 10 01 31
D-33501 Bielefeld, Germany
ulrich.laaser@uni-bielefeld.de