

Abstract

Studies on collective violence conducted since the end of the Cold War have mainly involved cursory epidemiological examinations. Deficiencies in defining violence, as well as in collecting and analyzing existing information, have made it difficult to identify the types of violations that may occur, given a specific set of circumstances; to determine which groups are most vulnerable to violence; and to arrive at solutions to remedy these situations. Better evidence of the causes and types of injuries in conflicts will facilitate analysis of violent events in ways that can be used to promote and protect the rights of individuals and population groups. The marriage of human rights perspectives and epidemiologic research methods will allow the potential of each to be realized and thereby may ultimately help reduce the impact of collective violence on individuals and societies in years to come.

Les études portant sur la violence collective commise depuis la fin de la Guerre froide ont consisté essentiellement en examens épidémiologiques. L'absence d'une définition claire du concept de violence, ainsi que des insuffisances concernant à la fois la collecte et l'analyse des informations existantes, ont rendu difficile l'identification des types de violations pouvant survenir dans des circonstances spécifiques données, la détermination des groupes les plus vulnérables à la violence et la formulation de solutions pour remédier à ces situations. Une meilleure connaissance des causes et des types de blessures subies dans le cadre des conflits facilitera l'analyse des événements violents de façons pouvant être utilisées pour renforcer et protéger les droits des personnes et des populations. L'union des perspectives en matière de droits humains et des méthodes de la recherche épidémiologique permettra de réaliser le potentiel de chacune et, par conséquent, pourra contribuer en fin de compte à réduire l'impact de la violence collective sur les personnes et sur les sociétés au cours des années à venir.

Los estudios sobre la violencia colectiva realizados desde el final de la Guerra Fría habían implicado, principalmente, exámenes epidemiológicos someros. Las deficiencias en la definición de la violencia, al igual que en la recopilación y el análisis de la información existente, han dificultado la identificación, dado un conjunto específico de circunstancias, de los tipos de atropellos que pueden suceder; han dificultado la determinación de cuáles grupos son los más vulnerables a la violencia y han obstaculizado la creación de soluciones que remedien estas situaciones. Mejores pruebas de las causas y los tipos de lesiones en los conflictos facilitarán el análisis de sucesos violentos de maneras que puedan utilizarse para promover y proteger los derechos de individuos y de grupos de poblaciones. El casamiento de las perspectivas de derechos humanos con los métodos de investigación epidemiológica permitirá que se realice el potencial de cada uno de los mismos y, de esa forma, podrá finalmente ayudar a reducir el impacto de la violencia colectiva en los individuos y las sociedades en el futuro.

ADDRESSING COLLECTIVE VIOLENCE: An Epidemiologic Context for Human Rights Promotion

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Since the end of the Cold War, studies on collective violence have mainly involved cursory epidemiological examinations. This is beginning to change with the World Health Organization's increased focus on violence, action by many nongovernmental organizations to control small arms, and a research base in academic programs on humanitarian intervention and forced migration.^{1,2} Counts of the dead have, of course, been used to summarize the direct effects of war, political violence, and famine in areas such as Somalia, the Democratic Republic of Congo, Nicaragua, and elsewhere, but these numbers have been used more for supporting political arguments than for applying systematic analysis.³⁻⁸ Deficiencies in defining violence, as well as in collecting and analyzing existing information, have contributed to difficulties in identifying the types of violations that may occur, given a specific set of circumstances; determining which groups are at greatest risk of being affected by violence; and arriving at solutions to remedy these situations.

Epidemiologic approaches to violence that use standardized measures and definitions to more accurately collect, compare, and analyze information can make significant con-

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tributions to ending or lessening violence and its spread. Improved measurement systems can also go a long way toward facilitating human rights promotion, which may in turn assist health professionals to prevent or mitigate the affects of collective violence on populations.⁹ We attempt here to describe the patterns, magnitude, and impact of collective violence on health and health systems. Recommendations for improved surveillance and analysis follow.

Collective Violence Then and Now

Actions such as laying siege, destroying essential goods and services, poisoning water supplies, and enslaving the enemy often accompanied warfare in pre-modern times. Since establishment of the nation-state in 17th-century Europe, war has almost exclusively involved soldiers of one nation engaged in direct battle with soldiers of a rival nation.¹⁰ This approach to warfare, though no less bloody, at least limited noncombatant injuries. Anti-colonial uprisings, which often involved guerilla warfare, blurred the distinction between military personnel and civilians. War in the 20th century caused deaths in as much as 20% of the population in some countries.¹¹

Genocide- and democide-related deaths rose rapidly in the 20th century as the emergence of new technologies improved the efficiency of mass killings.¹² A total of 33 million civilians died in the 25 events that claimed the greatest number of lives in the 20th century. These included the genocide of Armenians in 1915; the Turkish massacre of Kurds from 1937 to 1938; the Nazi holocaust of Jews, gypsies, and homosexuals prior to and during World War II; the massacre of Hutus by Tutsis in Burundi in 1972; the actions of the Khmer Rouge rule in Cambodia in the 1970s; and the 1994 genocide of Rwandan Tutsis. About 12 million more people have been killed in other genocides, and an additional 40 million in the famines resulting from war, genocide, politicicide and democide.¹³⁻¹⁵

Most of the conflicts that proliferated post-Cold War had been going on for years. The history of the 20th century is littered with examples of forced migrations, confisca-

tion and destruction of property, physical assault and rape, and other forms of violence directed at noncombatants. Stalin's reign of terror (1930s and 1940s) and China's Great Leap Forward (1959 through 1962) took the lives of millions of civilians. Both occurred at times when state sovereignty was thought to be inviolable and citizen's rights were weak or nonexistent. Such sovereignty was frequently synonymous with impunity even for massive violations of human rights. Since the end of the Cold War, sovereignty "is being re-defined. States are now widely understood to be instruments at the service of their peoples, and not vice versa. At the same time, individual sovereignty . . . has been enhanced by a renewed and spreading consciousness of individual rights."¹⁶

There is now recognition that these acts must be prevented and punished. Attempts to seek reparation and to provide redress provide opportunities for promoting and protecting human rights, efforts which can be strengthened if supported by systematic documentation and analysis.

The beginning of the 21st century has seen a widening gap between the opportunities for and the realities of rights protection in violent conflicts. Technological advances have aided the development and dissemination of expensive new advanced technologies for killing and have increased the availability of inexpensive old technologies.¹⁷ These factors have also heightened noncombatants' vulnerability to violence in times when internal conflicts are particularly on the rise.¹⁸ Parity among combatant groups has also decreased. For example, NATO forces have fallen behind in the technology of killing. The war in Kosovo was the first in history to fulfill a century-old goal of being fought without the commitment of ground forces by the winning side.¹⁹ With only one side of a conflict having access to technological advances for killing, the weaker side has little chance of protecting its noncombatants.²⁰

In countries where internal conflicts exist today, torture, disappearances, and various forms of repression have been used to pursue economic, political, and ideological control. Although these violations of rights may be denounced, the resulting loss of security and economic

opportunities also affects a much larger population. Loss of income and medical and other services can increase the vulnerability of people to disease and malnutrition, thus indirectly adding to the mortality of the general population.²¹ Additional rights violations occur when people are internally displaced or become refugees. By these measures, violence is epidemic today. More people are displaced worldwide today than at any other time since the end of World War II.²²

Determinants of Violence

Collective violence, which involves the use of force by groups to achieve political, economic, or social objectives, can be politically motivated and can include: wars and related conflicts that occur within or between states; state violence that results in genocide, repression, disappearances, torture, and other human rights abuses; and organized violence, such as gang warfare and criminal violence associated with banditry.²³

Finding the causes that spark violence is often difficult or arbitrary. This is especially true for internal conflicts, as any one type of violence may be intimately related to the other types. Indeed, one scenario can stimulate another, and the predominance of any one type may be temporary. All three types of collective violence identified here can threaten the security of individuals and communities and result in human rights being violated with impunity. As impunity becomes the norm, new forms of economic exploitation and violence may develop.

A greater focus on antecedent or enabling conditions that lead to the emergence of violence is crucial to understanding and mitigating further outbreaks. An excellent example of such research was carried out by the International Committee for the Red Cross (ICRC) in Afghanistan and Cambodia, which showed that the number of firearm deaths declined little as weapons were redistributed from the military to the civilian sector during declines in hostilities.²⁴ Potential genocides in Kosovo, East Timor, Chiapas, and Burundi have been prevented or attenuated through heightened international attention.²⁵

The Effects of Collective Violence

In 1972, Gil Eliot, a mortality-trends analyst, wrote that “the scale of man-made death is the central moral as well as material fact of our time.”²⁶ In the 20th century, collective violence either directly or indirectly caused about 5% of all deaths. By comparison, in the 17th, 18th, and 19th centuries about 2% of all deaths resulted from collective violence. Military deaths per million rose 18-fold from the 19th to the 20th century, whereas military deaths in the 20th century were estimated at only 24% of all conflict-related deaths due to the predominance of civilians among the indirect casualties.²⁷ In times of war and outbreaks of violence, large-scale deaths among noncombatants have often occurred prior to, during, or just after military engagements; and they occur less often independent of military conflicts.^{28,29}

The unknown, often unrecorded, effect on noncombatants is indeed the moral issue of our time. When noncombatant deaths go unrecorded, their impact is less recognized and efforts at preventing them may be less specific and more difficult to measure. In addition to mortality rates, the other ways violence affects populations deserve mention. For each war-related death, between 3 and 10 people are injured, as many as 20 people may be displaced, and many more undergo social and economic disruption.^{30,31}

Epidemiology and Collective Violence

There is no consensus on the meanings of terms used to describe collective violence or on how incidents of violence are best measured. Current methods used to tally noncombatant deaths, whether directly or indirectly related to violence, are particularly limited. In areas where armed forces are well-organized, combatant deaths may only be counted even when noncombatant fatalities are in the majority.³²

To better understand the impact of collective violence, direct and indirect effects of violence and the incidents themselves must be defined in a manner conducive to measurement. Standard definitions have yet to be established that can be used to compare violent events. One approach is to estimate the magnitude and duration of each major event

in terms of healthy years of life lost—that is, the difference between healthy years actually lived and those that are within human potential.³³ Although data from many conflicts have been so limited that such comparisons would have poor sensitivity, this approach may offer a robust approach to measurement.

According to most findings, a small number of major conflicts account for the majority of recorded deaths. Differences in categorizing individual conflicts have little effect on the total war-related deaths estimated. Even when researchers use similar definitions and are interested in counting similar categories of violence-related deaths, the number of deaths attributed to a conflict may still vary considerably.³⁴ Most important in accounting for large variations in estimates of magnitude are the sources of data and the definitions used for causes of death.

The most accurate epidemiologic information available is on deaths caused directly by acts of war. Deaths of military personnel are usually recorded in military vital-event systems and therefore are more accurate, typically varying by no more than 10% to 50% from one source to another. This contrasts with conflicts fought by non-state groups, for which mortality statistics, even of combatants, are more easily manipulated, less readily confirmed, and can vary by as much as 100%. Genocides, politicides, and democides are subject to greater statistical vagaries and are the hardest to confirm, even when deaths are related directly to conflict. Estimates that attempt to include the deaths of noncombatants may vary as much as five- to tenfold.

Combatants bear the highest risk of death in most conflicts. Although civilians' relative risk is lower, the attributable risk of death in conflict may be greater for civilian populations, who are at greater risk of exposure. Including non-combatants in death tolls of collective violence-related events would represent millions of potentially preventable deaths since the end of the Cold War.

Reducing Violence by Protecting Human Rights

When the human rights of certain groups are violated, including violations resulting from discrimination and

denial of participation, security generally declines and violence rises. Often this includes gender- and economic-based crimes.³⁵ To reduce violence and its effects, the process of social decline must be identified at the time it takes place, and efforts must be made to ensure the promotion and protection of human rights, including those related to basic securities and economic and civil rights.³⁶ Where collaborations have occurred between humanitarian and human rights initiatives, results have been impressive.

Widespread dissemination of information about the violation of rights has increased awareness of human rights throughout the world.³⁷ More people in more places know about rights abuses inflicted on noncombatants in a more timely fashion than ever before. During the genocide in Rwanda, for example, estimates of death tolls were broadcast daily. This raised awareness worldwide, generated support for refugees, and led to revisions in UN procedures to initiate more timely action to prevent future genocides.³⁸ In Burundi, where genocide appeared imminent, a combination of measures (as described below) appears to have partially stemmed the violence there.^{39,40} Making the invisible more visible will not alone save lives, but it may increase the likelihood of timely interventions. Some useful actions have included the following:

- Initiation of studies to measure and assess changes in mortality and other risk factors that escalate during times of conflict, such as those conducted in the Democratic Republic of the Congo, Afghanistan, Kosovo, and Iraq.⁴¹
- Provision of food, medicine, and education to help resident populations survive during crises.
- Registration of internally displaced persons and refugees so that they may receive assistance and protection.
- Publication and prosecution of war crimes, including gender-based violations in national and international courts.
- Use of the media to counter the dehumanizing incitement of hate-group violence.

- Limitation of access to weaponry, especially small arms.

Since the end of the Cold War, international humanitarian interventions have arguably saved millions of lives in war zones around the world. These interventions have included creation and support of on-site human rights monitors and medical NGOs during crises, support for social and economic rights by UN organizations during and after a conflict, publication of violators' identities by governments and the press, and punishment of violators at national and international levels.⁴²

The Importance of Consistent Measurement Standards

The promotion and protection of human rights requires that incidents of collective violence in their various forms be systematically measured, documented, and made public. Violent events are commonly measured by their physical manifestation, such as population movements, injuries, and deaths. In practice, attempts at descriptive epidemiology of violence in cross-national research have focused almost exclusively on the single outcome—death.⁴³ Although death is a key indicator of violence, it provides only part of the picture. To fully assess the impact of violence on the rights, health, and well-being of a population, the traditional concepts of war-time injury and death must be re-examined. Much can be learned from the recent efforts to ensure the inclusion of acts of rape in the definition of a war crime.⁴⁴ This change has made this crime and its impact on victims' lives more visible and, by so doing, has also improved opportunities for redress.

Other problems do still exist, one of which is that civilian authorities' definition of war-related deaths differs from the definition used by the military. Under civil registration, all deaths that occur during an organized conflict involving political or economic control of a territory are considered war-related deaths, whereas military authorities consider only those deaths that occur on the battlefield to be war-related.⁴⁵

Another approach that has continued to cloud the measure of conflict-related deaths and collective violence was popularized by the Correlates of War project and the Stockholm International Peace Research Institute.⁴⁶ This approach defines “minor armed conflicts” as those in which combatant deaths range from 25 to 1,000 over the course of an entire conflict; combatant deaths in “intermediate armed conflicts” range from 25 to 1,000 for each year of a conflict; and “major conflicts” are those during which more than 1,000 combatants die per year.⁴⁷ Although such thresholds are useful for political and diplomatic endeavors, they fail to reflect the characteristics and contextual factors present in countries that are undergoing political and economic change and resulting patterns of violence. They are therefore not very useful measures from a health and human rights perspective. No less problematic is that focusing only on combatant deaths ignores the number of people whose deaths and disabilities occurred off the battlefield, as well as the nonfatal consequences of violence.

Suggestions on Standardizing Measurement

Confusion, politicization, and imprecision in measuring conflict-related injuries have limited the usefulness of existing databases of wartime morbidity and mortality statistics and may have affected the promotion and protection of both health and human rights. Research is needed to identify characteristic patterns that accompany and result in different forms of collective violence and to determine their implications and effects on various groups. Markedly different patterns may be revealed and determined by whether conflicts are within or between states, whether high- or low-technology weapons are used, and on the strength or weakness of a country’s resources.

Standardized indices are needed to assist in comparisons of regions and trends over time to make real the mind-numbing data on war-related deaths. Inclusion of specifications concerning the population in which deaths occur can also facilitate elaboration of indicators of the number of people killed. Comparisons of death rates before and after violent events will help identify the magnitude of mortality

rates. Specifications of the time periods during which deaths have occurred and patterns determined by the types of violence over the entire period of a conflict will facilitate identification of comparable rates of mortality. This can help identify points for timely intervention to protect rights.

The effects of conflict on particular subgroups, such as orphans, abandoned children, refugees, and internally displaced populations, may be difficult to determine and require special attention. Population size and density may vary tremendously over short periods of time as people seek safety and better resources. Measurement of the health impact and health status of shifting populations with uncertain denominators is problematic. In the absence of solid data-collection methods, personal accounts of experiences should, at minimum, be recorded. This may help individuals to seek reparations, and it might encourage the publicizing of the horror of the conflict, even if it obfuscates the elaboration of patterns needed to facilitate human security among population groups.

No standard definitions of direct and indirect effects of conflict exist today; much more work is needed in this regard. At minimum, indirect effects should be defined to include the following:

- Population displacement.
- Changes in morbidity and mortality rates of civilians due to changing economic opportunities and access to services or acts of violence.
- Changes in transmission of infectious diseases or in occurrence of injuries and mental-health status due to changes in the economy or population movements, disability, and living conditions.

Better evidence in relation to the cause and nature of injuries in conflicts is emerging. This information is key to the elaboration of standard operative definitions of conflicts, the nature of injuries, and direct and indirect effects. Such definitions will facilitate analysis of violent events in ways that can be used to promote and protect the rights of individuals and of population groups affected by this preventable scourge. Prevention, protection, and the redress of injuries

have improved enormously since the end of the Cold War, but these efforts are still in their infancy. The marriage of human rights perspectives and epidemiologic research methods will allow the potential of each to be realized and thereby may ultimately help reduce the impact of collective violence on individuals and societies in years to come.

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