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The health and human rights of survivors of gun violence: Charting a research and policy agenda

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Abstract

The health and human rights implications of violently acquired impairments (VAI), specifically gun-related injuries and trauma resulting in disability, represent an overlooked public policy concern. For several decades, detailed attention has been committed to better understanding of the international arms trade and its consequences. A discursive shift in the last decade from "small arms control" as the core objective (a "hardware" focus on the weapons themselves) to "armed violence prevention" (a focus on impacts, wider drivers, and solutions) still requires a rigorous set of objectives that respond to the rights and needs of survivors of such violence. This article seeks to chart some of the challenges of responding to gun violence survivors and identify entry points for contributions from health, social science and human rights researchers and practitioners. Efforts to address armed violence typically pivot around two goals: reduction and prevention. But what of those already injured? This article argues that a third goal is overdue for attention: response to those injured, impaired, and disabled from gun violence. This would allow a clear pathway for progress (conceptual, political, policy, and practice) to be defined related to gun violence under the ambit of three overarching goals: reducing existing gun violence; responding to those already injured, traumatized, and impaired by such violence; and preventing future violence from occurring.

Introduction

> "At the beginning, family and friends were taking care of me, they came to visit, and were taking turns to watch over me. But now they are tired. It has been more than two years and a half that I have been here. They are not coming anymore, or only very rarely. My neighbors in the ward have taken over and take care of me now when I need something."
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> — *Pierre Claver, shot in the back while sitting in a bar with some friends in April 2003. Caught in crossfire between army and rebel fire, he was one of ten people injured in the attack, two of whom died. He is now paralyzed. He lived at the Médecins Sans Frontières Centre for Lightly Wounded in Burundi until it closed in January 2006.*[1]

The health and human rights implications of violently acquired impairments (VAI), specifically gun-related injuries and trauma resulting in disability, represent an overlooked public policy concern. Becoming impaired and experiencing disability through an act of violence, whether intentional, self-directed, or accidental, can be a profoundly traumatic experience. Such violence has an array of possible expressions and consequences: someone could become disabled after being caught in cross-

fire on their way to school or work; could be shot and sexually violated whilst fleeing a war zone; or could be tortured and humiliated at gunpoint with no shot actually fired. One could become paralyzed like Xavier Torres, director of Ecuador's leading disability rights organization, who answered the door when his brother-in-law came to kill his sister; or suffer severe facial impairment from a suicide attempt gone awry, as experienced by Simon Kongyong Logun in Sudan. Regarding himself as "walking dead," Logun says, "I have killed myself with a gun. I know what they can do."[2]

The dearth of analysis on the numbers, needs, and realities of gun violence survivors has led to an information vacuum, hindering the development of effective policy, services, and standards. This article seeks primarily to introduce potential areas for the consideration of the health, social science, and human rights communities by outlining some of what is known and where further focused research is required to fill information gaps.

A note on terminology

In this article, the terms "survivors of gun violence," "survivors," or "violently acquired impairments (VAI)" describe conditions and/or people who have been physically injured, intimidated, or brutalized through gun violence. These terms are used to differentiate people who are fatally wounded in gun violence (victims) from those who live through such violence (survivors). This somewhat crude but necessary formula has emerged as a way for the millions of people injured and impaired every year by guns to find a place in the international discussions and processes aimed at reducing armed violence and controlling the impacts of small arms and light weapons.

Gun violence does not just affect the individual shot or threatened. Secondary victimization also includes relatives, colleagues, and other people close to the person(s) directly injured, as well as caregivers and perpetrators. Secondary survivors are frequently overlooked but can experience multiple health, social, and economic outcomes.[3] Little is understood about the timing dimensions and manifestations of trauma and anxiety secondary survivors may experience with serious consequences: loss of confidence, employment, well-being, family connections. Vivo International has noted that secondary victims often "show the after-effects of violent acts and constitute a much larger group than the one traditionally considered by policy makers."[4]

The use of the term "victim" has been established within the international community most prominently with the 1985 United Nations (UN) Declaration of Basic Principles of Justice for Victims of Crime and Abuse of Power.[5] The Principles are the basis, with slight adaptation, for the definition of survivors of gun violence employed in this article:

Survivors of gun violence include persons who, individually or collectively, have suffered harm, including physical or mental injury (violently acquired impairments), emotional suffering, economic loss, or substantial diminution of their fundamental rights due to the misuse of small arms and light weapons. A person shall be considered a survivor or a victim regardless of whether the perpetrator is identified, apprehended, prosecuted or convicted and regardless of the familial relationship between the perpetrator and the victim. The term also includes, where appropriate, the immediate family or dependants of the direct victim and persons who have suffered harm in intervening to assist victims in distress or to prevent victimization.

In other conventional weapons control processes, such as the 1997 Anti-Personnel Mine-Ban Convention and the 2008 Convention on Cluster Munitions, the term "victim" is predominant. In practice, it has been interpreted to include directly affected individuals, their families and communities.

The use of the term "survivors" is also part of the larger struggle to challenge the language employed to describe the process and experience of disability and people with impairments. These debates pivot around recognizing people before their impairment(s) and understanding disability as a form of oppression or lived experience, as opposed to a medical condition. The core issues are neatly described by one analyst: "Clearly, people with disabilities do have health conditions and can benefit from medical care, rehabilitation, and other related services. Injustices occur when disability is overmedicalised. Seeing difficulties purely as individual problems can ignore structural issues that contribute to health status, such as poverty, environmental barriers, and social exclusion."[6] Therefore, disability is understood to be the culmination of attitudes, restrictions, and barriers that people with impairments experience. Disability, the term and concept describes the interaction with society, not

the attribute(s) of a person.[7]

ARMED VIOLENCE: SCOPE AND SCALE

Armed violence results in a range of social, economic, political, health, cultural, and security impacts, with injury, disability, chronic disease, impairment, mental health disorders, risky behaviour, and trauma regarded as both indirect and direct consequences. Such violence is understood to include the use and misuse of small arms and light weapons, explosives, and bombs, and is reported to kill some 525,000 people annually.[8] Most of these deaths occur in non-war settings, in nations blighted by violent crime, weak policing, dysfunctional justice systems, and the misuse of guns.

The tools of such violence are ubiquitous. Global estimates of weapons stocks are around 875 million small arms and light weapons, with standards to regulate and diminish stocks varying dramatically among nations and even within nations. Nearly 75% of small arms in the world (650 million) are in the hands of civilians. US citizens hold some 270 million of these: about 90 firearms for every 100 people.[9]

Gun violence drains health, education, and justice systems which may already be thinly stretched, diverting resources from other pressing priorities and public services. In the US, the estimated cost of gun-related violence (including psychological costs and reduced quality of life) has been calculated at 100 billion dollars per year.[10] In low- and middle-income countries, it can be even greater relative to national economic productivity. Brazil spends 10% of its annual GDP responding to armed violence, Venezuela some 11%, and Colombia and El Salvador each exhaust up to 25% of their GDP.[11]

Guns are used with both discriminate (for example, someone kidnapped at gunpoint) and indiscriminate consequences (for example, someone shot in crossfire). Other conventional weapons such as mines and bombs are rarely used to perpetrate crime and violence because of the risk posed to the holder of the weapon. This reality is inverted with the misuse of guns—a child can suddenly become a powerful figure when holding a gun, loaded or not. Guns pose a serious security threat even when not fired, and are often used to threaten and intimidate. Gun "brandishing" (prominently displaying, waving, or otherwise drawing attention to the weapon) is a common form of intimidation, especially against women. As one woman told her interviewers, "He would take the gun out of his pocket and put it over there. It would be right in front of me. He didn't point it at me, he just let me know it was there."[12]

Firearms are also critical enablers of other forms of violence and human rights abuse, including sexual violence and torture which create lasting physical as well as mental damage. Some forms of gun violence leave people not fitting the standard definition(s) of people with impairments, yet carrying significant mental and behavioral scarring (for example, increased alcohol and substance misuse, anxiety disorders, and unsafe sex).[13] Heather Fredrickson, interrogated by her husband at gunpoint, provides a stark account of the impact: "The day that gun was in my face changed my whole personality. It was like I died. Once in a while, I'll hear a sound, or see something, and I'll come running around and lock everything, an overwhelming heartbeat sensation, a flood of warmth and anxiety, a scary and horrifying feeling that he's coming to get me, coming to kill me."[14]

Impairment, injury, and disability

In contrast to what is known about who makes, sells, buys, and uses guns and ammunition, strikingly little information is available on the numbers and circumstances—physical, mental, economic, social, or political—of those who survive gun violence. According to the World Health Organization (WHO), "Global data on the impact of small arms on the health of individuals are far from complete. What data are available, however, suggests that hundreds of thousands of people are killed each year by those weapons. Millions more survive their injuries but are left with permanent physical disabilities and mental health problems."[15] In the US, it has been postulated that for every firearm fatality, three people with non-fatal gun injuries will report to hospital; many more do not go to emergency rooms, increasing the estimate to a possible six non-fatal injuries per fatality.[16]

Focusing on disability more broadly, 15% of the global population has some form of impairment or disability.[17] If families are included, approximately two billion persons are directly affected by impairment and disability: a third of the world's population, with 20% living in poverty.[18] Some 80% of people with disabilities live in low-income nations.[19] People with impairments are particularly susceptible to comorbidities due to unequal access to health care,

further imperilling their health status.[20] Women and girls with impairments endure significant marginalization due to the low status of women in many societies.[21] As the links between armed violence and underdevelopment become clearer, and the "bidirectional" relationship between disability and poverty better understood, work is required to bring these two streams of work together.[22] This would remedy the gap in analytical guidance for policymakers and practitioners on the links between poverty, violence, insecurity, and disability.

Quantifying the number of people impaired due to gun violence is critical in order to more reliably inform, develop, and monitor public policies. The health community can play a leading role in this area. On occasion, when research results become available, a stark picture emerges. A study by the International Rescue Committee in one of the world's largest refugee camps found the single major cause of physical impairment to be gunshot injuries — 32% of all cases.[23] This study highlights not only the need for better injury reporting in areas affected by armed conflict, but also the importance of focusing on populations at particularly high risk, such as refugees and internally displaced people.[24]

High numbers of impairments from gunshot injuries are found in peaceful settings (for example, the United States, Brazil, and Kenya) as well as nations recovering from violent conflict (for example, El Salvador and South Africa). Crime and armed violence commonly surge after peace agreements or political transitions.[25] For example, the Transitions Foundation of Guatemala provides medical and psychosocial care for people living with disability. Some 20% of its client base is impaired or traumatized due to gunshot wounds from gang violence, civil war, or accidents.[26]

Impacts of gunshots and trauma care

The severity of a gunshot injury—and the likelihood of permanent impairment—are affected by the number of shots and technical specifications of the ammunition used, for example, bullet size, type of tip (for example, hollow-tipped, pointed, round nose), velocity, and flight pattern. These factors influence a bullet's trajectory through the body and the subsequent damage to tissue, organs, and bones. Bullets lacerate and crush tissue and bones in the direct path of the projectile, and also cause cavitation. When a bullet enters the body, it opens a temporary vacuum behind it for a few thousandths of a second, much like the vacuum a torpedo creates when travelling under water. The greater the speed of the bullet, the larger the initial cavity; a large cavity may be 30 to 40 times the diameter of the bullet. A lasting cavity or wound track will remain after the bullet has passed through. The pressure that the temporary cavity applies on surrounding tissues and organs provokes injuries far from the bullet path; these can be hard to detect, particularly in soft organs. This pressure is also capable of fracturing bones several centimeters from the bullet track.[27]

> My body from the breast down, I couldn't feel it. Imagine just seeing shit in your bed without having felt it. ... I wanted to kill myself. ... I promised myself that when I get discharged, I would drink every day. It was living hell. ... I felt as if I'm alive above my tummy; downwards, I felt dead. I even burned my legs with cigarettes.
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> — *Erny, 28, South Africa*[28]

Injuries to the extremities often result in fractures that may lead to hemorrhages, infections, amputations, or permanent trauma due to joint or bone deformities. Brain and spinal cord injuries pose complex challenges, leaving irreversible damage such as paralysis, sexual dysfunction, limited movement, seizure disorders, bowel problems, incontinence, and severe facial disfigurations.

Emergency medical care, where available, may be just the start of a long process toward regaining limb function, learning to walk again, or in the case of gunshots to the brain, learning how to speak, remember, and calculate. Trauma care in low- and middle-income settings is typically weak and underresourced. Short and Pinet-Peralta have put forward an illustration of the loss of life from lack of adequate trauma care related to traffic injuries. In the United States, for every 10,000 crashes, 66 people die; in Vietnam, 3,181 people die.[29] Such disparities represent a considerable challenge when primary health care services are weak or pressured.

Infrastructure and trauma response systems in many nations are often simply not in place. Significant advances have been made in trauma care in recent decades, yet these remain limited to particular settings (for example, high income nations, capital cities

in other settings, military hospitals) and demonstrate the potential to reduce fatalities and level of impairment.[30] Studies and programs in a number of countries demonstrate that low-cost, sustainable improvements can be made to health care through training of first responders, and through better attention to the organization of existing resources and equipment.[31] This is critical, as WHO estimates that 50 to 80% of traumatic deaths happen before hospital arrival in low- and middle-income settings, and asserts that effective trauma stands to "substantially reduce death and disability following injury."[32] One study confirms that improvements in the provision of pre-hospital trauma care are possible by training those most likely to arrive at the site of an accident first.[33] As one example, long distance truck drivers in Ghana—often first on the scene of road crashes—were trained in basic emergency trauma care, bolstering weak formal emergency medical services. Another example, from mine-affected areas in Kurdistan and Cambodia, also noted the value of investing in training, and the provision or re-organization of supplies and equipment. In these settings where ambulances still remained unavailable, death rates among injured people fell from 40 to 9% due to training of first responders and advanced training in trauma care to existing medical staff.[34] The same type of approaches can be considered for trauma care in contexts suffering acute gun violence.

Compounding these challenges are significant gaps in multifaceted tertiary services and assistance in many nations. In 1994, the Pan American Health Organization estimated that rehabilitation services in developing nations reach only 1 to 3% of people in need.[35] For those who can access it in the first place, the quality and length of rehabilitation is another added complication. In the US, it has been observed that spinal cord injury rehabilitation has contracted in the last decade. The implications include less time to train family members who will become caregivers, reduced opportunities to adapt built environments (widening doors for wheelchair access in homes, for example), and less ability to focus on psychosocial support.[36] In the US, gun violence is the third-leading cause of spinal cord injury, with some 1500 to 2000 individuals disabled each year.[37] Most of these individuals are young, unemployed, unmarried, and from ethnic or racial minorities. Without appropriate social support, their rehabilitation pathway is at the least underdeveloped.

Accessible and well-linked services take on another level of significance when considering the view of Waters and colleagues that many individuals impaired through gun violence may be less responsive to rehabilitation than those in car crashes. This may be due to feelings of guilt or bearing some degree of fault for the injury and feeling "less deserving of the benefits of rehabilitation and [exhibiting] poorer long-term outcomes."[38] Other studies in the US of VAI survivors indicate that an individual's alienation from society presents challenges in the rehabilitation process for the patient and the medical staff. Questions of trust, outcome, and process are often understood from vastly different, often opposing, viewpoints.[39]

Approaches to research and policymaking

There are three important aspects of policymaking for people with VAI: prevention, rehabilitation, and equalization of opportunities requiring attention at various levels and layers: individual, community/interpersonal, and environment or system. Prevention means enhancing trauma response to avoid disability, and also working to reduce the likelihood and severity of post-injury illness, and further impairment, thereby preventing additional negative physical, psychological, and social consequences. Rehabilitation refers to efforts to enable individuals to reach an optimal level of functionality, while supporting families through certain adjustments (for example, dwelling adaptation, caregiving skills, and support). These adjustments can include infrastructure and devices to assist with the impairment, which can facilitate readjustment into communities and societies. Finally, equalization of opportunities is the process by which society makes health and social services, the environment, cultural life, as well as leisure, educational, and work opportunities equal to all its members.[40]

WHO has noted that in many contexts it will not be possible to achieve a comprehensive and integrated victim-services policy, but the coordination of policy development between the different sectors that interact with victims of violence is a reasonable policy strategy for strengthening victim services."[41] The discipline of public health provides one useful schema for understanding levels of action and the timing of interventions. This can be further strengthened with a more deliberate focus on consequences, and premising multidisciplinary perspectives.[42] In relation to improving the health and human rights of survivors

of gun violence, it could be framed as such:

Primary prevention: Seeking to prevent gun violence happening in the first place with a combination of measures to strengthen firearms control, justice, health and security systems, eliminate poverty and alienation, and build resilience in the populations and communities at large.

Secondary prevention: Focusing on groups and individuals at high risk of perpetrating violence (for example, young men) and those at high risk of getting caught in crossfire of warring groups and gangs, in order to reduce injuries and impairments. Entails redesign or adaptation of built environments, improved access to health care, dedicated livelihood support, revitalised justice and security measures, and alternative and local forms of conflict resolution.

Tertiary prevention: Responding comprehensively to those already impaired and traumatized from gun violence in order to minimize negative impacts, such as secondary injuries, illnesses, and re-victimization. Includes ensuring that rehabilitation services, psychosocial support, employment assistance, trauma counselling, urban and transport design, and planning are accessible, empowering, and people-focussed.

Developing a research and policymaking agenda: Thematic considerations

Building a coherent agenda based on responding to the needs and rights of those injured and impaired from gun violence is in its infancy; in fact, it is yet to really begin. Moving from an ad hoc, often tangential focus on victims — typically those who have died — to a dedicated strategy to lift the lid on a raft of issues specific to those who survive is long overdue. What follows is a non-exhaustive, suggestive rather than definitive *tour de horizon* of some of the dimensions that could be explored and researched in order to build an evidence base for compelling policy and viable programming.

Gender

Across cultures, most acts of violence are committed by men and boys. This behavior appears to be the product of society and history rather than simply biology: men's near-monopoly of gun use can be seen as a manifestation of socialization into violent expressions of manhood, especially in cultures where male gun use is regarded as the norm.[43] Considerable evidence confirms that men and boys are acutely vulnerable to, and highly involved in, gun violence. Worldwide, violence is among the leading causes of death for people aged 15 to 44 , accounting for 14% of deaths among males and 7% of deaths among females in this age group.[44] Across all settings (high-income and low-income, war-torn, peaceful, or countries in transition), men and boys dominate firearm-related deaths and injuries, whether interpersonal, self-directed, or accidental:

* More than 90% of gun-related homicide victims are male.[45]

* Boys comprise 80% of the accidental shootings that kill about 400 children and injure another 3,000 in the US each year.[46]

* Of those who commit suicide with a gun, 88% are men.[47]

* It is estimated that in 50 years, there will be six million men missing from the Brazilian population as a result of homicides, the vast majority gun-related.[48]

In conceptualizing human rights-based responses, women and girls require particular attention because of (a) disproportionate rates of sexual and gender-based violence at gunpoint and (b) the low sociopolitical status of women in many contexts.[49] Assistance in this case implies that law enforcement agencies, health services, and social services must be alerted to needs and rights, and must respond quickly and appropriately. Weapons availability and misuse acutely exacerbate violence against women, with women at great risk of death, injury and psychological damage when a violent partner has access to a gun.[50] For example, in South Africa, one murdered woman in five is killed with a legally owned gun, predominantly at the hand of someone known to her.[51]

Further, caregiving responsibilities post-injury fall largely to women and girls—mothers, wives, sisters, partners—limiting opportunities to engage in economic activities, and often contributing to the deterioration of their own health.[52] Meanwhile, women and girls with impairments or injuries in crisis situations may be cast aside in order to concentrate the family's economic and physical resources on survival

of the rest of the family.

Care and support

The burden of providing care to disabled and seriously injured survivors often falls to networks of family, friends, and other community members. Caregiving is a mix of emotional, physical, logistical, and economic support. Enormous strains can be placed upon family members and communities—particularly girls and women—who become frontline providers of largely unpaid and unrecognized care in settings where services are weak or cost-prohibitive. In contexts where women provide the bulk of care, households in poverty or financial stress may become more pressured, exacerbated by the unequal earning power of men and women.[53] The importance of involving families in rehabilitation is paramount to broaden the support base for the individual, as well to support the well-being of caregivers through the provision of skills.

Livelihoods

In the longer term, survivors of armed violence and their caregivers may face difficulties reintegrating into socioeconomic life after the survivor's hospitalization and (if they are lucky) rehabilitation. Given that people with disabilities are often the poorest of the poor, the linkages between health, development, and human rights are particularly compelling. For example, a survey of patients at a rehabilitation clinic in El Salvador revealed that the leading concern for patients was how to make a living, not necessarily their long-term health.[54]

Gun violence results in more female-headed households due to the disproportionate number of men being killed or impaired in ways that preclude paid employment. Livelihood stress can also negatively affect the education of children and young people, with many dropping out of school or engaging in risk-taking behaviour (for example, drug couriering, sex work) to contribute to household income. Male unemployment can also be an exacerbating factor in violence against women.[55]

Beyond working to survive, employment can afford a social connection from contributing to a workplace or community and having responsibility for an outcome. This is an aspect that ought to be considered and better understood as part of returning to, or finding, work post-injury.[56]

Mental health

Injuries and disability sustained through gun violence are associated with psychological problems and can result in flashbacks, anxiety and fear, self-destructive behaviors, low self-esteem, depression, suicidal behavior, and alienation from friends and family.[57] As a result, "The mental and social costs to the individual who is injured are impossible to calculate. The repercussions of severe injury to the central nervous system can send survivors of shootings on an emotional roller coaster."[58]

In many settings, psycho-social intervention or the provision of mental health programming is inhibited by social custom, perceptions about the roles of men and women and their (gendered) capacity to withstand trauma, and inhibition on the part of those experiencing guilt for surviving armed violence. Mental health services are under-resourced and pressured in most contexts; however, in low-income and violence-affected settings, the service gaps and low awareness of mental health issues are particularly dire. Stigma, poor understanding, and weak service provision combine to see a wide range of conditions left untreated. The Lancet Global Mental Health Group has noted that mental illness and disorder is significantly associated with poverty, marginalization, and social disadvantage in all regions of the world.[59] There are, however, a number of initiatives where guidance can be sourced for work in this area, including ethical research principles.[60]

People who have experienced violence and other forms of trauma are thought to demonstrate a spectrum of disorders which can be understood as an alarm response. This typically includes reliving or remembering the event and what happened afterwards, as well as involuntary memories, dreams, dissociative states, or physiological and emotional arousal or withdrawal.[61]

Mental health can be further compromised after an injury or violent event through casual or unintended victimization from the images of guns, as well as actual guns, that saturate many cultures. People may feel re-victimized in many different situations, for example, seeing a gun on the hip of a security guard, or via the images of guns and shootings that abound in films and other media.

Inadequate response to trauma can lead to a cascade

of negative long-term impacts. Evidence suggests that survivors of VAI demonstrate greater levels of trauma than road crash victims; that the original violent act consumes a considerable amount of mental energy in the post-injury period.[62] This appears to pose challenges for rehabilitation, secondary health conditions, quality of life, and return to family and community living.

Suicide

The social stigma associated with suicide means that self-inflicted injury is largely neglected in efforts to prevent gun violence. However, the magnitude and patterns of gun suicide provide a compelling case for concerted attention.[63] Gun suicides represent 1.4% of the Global Burden of Disease, but this is distributed unevenly across regions.[64] Those who do survive self-directed gunshots often suffer head injuries that present a "formidable challenge to reconstructive surgeons," with significant social and psychological repercussions for the individual.[65]

WHO calculates that suicide accounts for some one million deaths each year.[66] The organization also reports that in the last 50 years suicide has shifted dramatically from mostly affecting older people to younger people.[67] The impact of young people killing themselves is particularly problematic due to the disproportionate years of potential life lost.[68] Attempts are believed to outnumber completed suicides by 20 to 1. It has been estimated that for every person who suicides, six people are profoundly affected and that effects can be experienced by up to three generations if the original suicide is shrouded in shame and secrecy, as so many are.[69]

Access to guns is a leading determinant of finality in both impulsive and premeditated suicide efforts. Unlike firearm homicides, which are primarily (but not exclusively) an urban and outdoor phenomenon, gun suicides routinely occur in the home and in rural settings.[70] Firearm suicide is typically regarded as a Western phenomenon, and gun suicide in developing nations has not received due attention, as the plight of Simon Kongyong Logun at the beginning of this article may suggest. The misreporting or underreporting of firearm suicide, including attempts, has been observed in a range of settings, with deaths or resulting injuries often described as accidents. Therefore, refined information collection and awareness-raising are required to calculate more accurately the extent of gun suicide.

Victims or perpetrators?

The question of who is a "perpetrator" and who is a "victim" is frequently complicated and replete with human rights dilemmas. In many contexts—war zones, communities affected by gang violence—survivors of gun violence are typically perpetrators of such violence. This poses a powerful dilemma for many government officials and parliamentarians: assist perpetrators of violence, or not? Thus, clear distinctions between innocent victims and guilty perpetrators can be a key determinant of public attention and resources. Further, as many survivors of gun violence are young men, often involved in or proximate to criminal activity, in communities plagued by armed violence, policymakers may be reluctant to direct precious resources to those deemed to be deserving of their injuries.

WHO has cautioned that victims of violence are themselves at increased risk of committing violence against others; this provides a powerful rationale for directing more attention and resources to their care.[71] One study concluded that exposure to gun violence approximately doubles the probability that an adolescent will perpetrate serious violence over the two subsequent years.[72]

Questions of justice loom large in this area, but criminal justice systems in many settings are dysfunctional or inaccessible. Research is needed to better understand how unresolved criminal acts affect individuals and their ability to cope with VAI. Rehabilitation of perpetrators is under-resourced and yet very necessary, particularly since many perpetrators of gun violence are living in the same communities—even the same homes—as their victims. Standards and norms vary enormously across the world in this regard; therefore research identifying good practice related to working with perpetrators of gun violence would be a useful contribution to policymaking and programming.

Women are frequently and unhelpfully designated the status of victim (typically conflated with children), while men are seen as violent perpetrators. Clearly, not all men are violent or pro-gun (just as not all women are naturally suited for conflict resolution), and further research and policymaking are needed to better understand why and how many men and boys choose not to engage in gun violence in contexts where violence is the norm.[73] Specifically, it would be

useful to know what forms of resilience and social cohesion influence men and boys to avoid gun violence, and how this can be amplified.

Another underexplored area is the degree to which affiliation with an armed group or gang provides positive coping mechanisms and systems of support for individuals impaired by gun violence. Peer connections can provide a powerful or at least helpful form of support for some individuals and may provide a low-cost policy option at the local level.[74] Hints of the possibilities can be gleaned from some studies and it is an area where further investigation would be helpful.[75]

Peace agreements and processes

Peace talks and agreements represent one vehicle for greater attention and commitment to this issue in war-affected contexts. More specific guidance would assist conflict parties, mediators, and UN agencies in ensuring that the needs of the war wounded—combatants and civilians—are included more systematically in peace agreements, particularly that assistance to survivors is included in any post-war recovery needs assessments. The pattern in agreements to date suggests broad declarative clauses with little definition on timeframes and implementation parameters and responsibilities. In Sierra Leone, for example, the 1999 peace agreement required the government to "design and implement a programme for the rehabilitation of war victims," without specifying what this entails.[76]

National governments and international organizations have the responsibility to ensure that the aspirations of those injured and impaired in war are adequately factored into disarmament, demobilization, and reintegration processes, particularly reintegration strategies: "The difficulties of economic integration are also compounded by the fact that persons with disabilities in war-torn countries are often very poor and have had little to no education ... Too little market research is done to ensure that the training given is rationally connected to job possibilities in the society at large."[77] These highly politicized processes feature tensions that often see a mismatch between the needs of combatants with injuries, as well as inequity in the care and assistance provided to personnel of security services and that of civilians.[78]

Participatory research

A final consideration is the necessity to enrich the processes of research, advocacy, and policymaking related to armed violence, small arms control, development, and security with more substantive inclusion of survivors of such violence. In seemingly unintentional and subtle ways, the policy communities working on small arms control and armed violence reduction have effectively excluded survivors. The call, "nothing about us, without us" ought to be taken seriously by those investigating the contours and ramifications of armed violence.[79] Engaged participation can take many forms and manifest at different times along the path from research to policy to action. This would also be one way to implement Article 4.3 (amongst others) of the 2006 Convention on the Rights of Persons with Disabilities, which calls for the active consultation and involvement of people with disabilities in processes of relevance to them. Greater inclusion of survivors in such processes needs to also come with a commitment from advocates and researchers to be careful about avoiding revictimization and superficial involvement. This could be practically realized in a statement or principles of good practice; for example, providing a code of conduct for respectful interactions. Substantive engagement with the politics of disability and the practice of ethical and inclusive research is also to be encouraged.[80]

Conclusion

The gap between information and action in this area is large. The thematic considerations section of this paper pointed to areas in need of such research. Survivors of gun violence and caregivers are often voiceless in decisions that affect their future -- not only in engagement at the local level but also involvement in collective advocacy, research, and policymaking. This article aimed to highlight some of these knowledge gaps and potential areas for human rights and social science health practitioners and researchers to address. These disciplines are well placed to help move this issue forward, providing nuanced analysis and evidence to make clearer and fairer decisions, change attitudes, and above all, contribute to the full enjoyment of human rights by those who experience disability as a result of gun violence.

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