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The Role of Social Sciences in Advancing a Public Health Approach to Violence

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Abstract

The public health approach maintains that violence is shaped by a range of risk factors that can be altered, mitigated, or even eliminated. Conceptualizing violence as a type of "preventable disease" has provided important insights and

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interventions but also introduces limitations that may not be sufficiently acknowledged or understood within this perspective, particularly in the Global South. This chapter briefly outlines the history of the public health approach to violence in South Africa before describing its yields and limits. It then draws on recent studies, which suggest that the integration of interdisciplinary approaches emerging from a strong social science tradition can mitigate many of the conceptual limitations of the public health approach. The chapter concludes by demonstrating how approaches to violence grounded in these sorts of frameworks promise to deliver context-rich explanations of violence alongside the socio-ecological accounts for violence favored by a public health approach.

Keywords

Public health · Violence · Global south · South Africa · Decolonization · Epidemiology · Homicide · Gender-based violence

Introduction

As part of the European expansionism that characterized the project of Western modernity, colonization is defined by violence (Sonn and Stevens 2021). As a key strategic stop on the Indian Ocean spice and slave trade routes, South Africa represented significant economic possibilities to colonial powers and was targeted for permanent settlement by the Dutch in the mid-seventeenth century. Although there is extensive evidence of interpersonal violence among indigenous populations before this time (Pfeiffer et al. 1999), the arrival of Europeans signaled the start of a modern state that relied heavily on the systemic oppression and dispossession of local populations, and violence against imported slaves (Worden 1985) in order to achieve relative prosperity for a European settler minority. Even after the abolition of the practice of slavery, the colonial state continued its practices of racially based disenfranchisement, forced labor, and other forms of violent bureaucracy. The rise to power of Afrikaner white nationalism in the twentieth century ushered in unprecedented violence against black South Africans, provoking parallel resistance against the apartheid state. The sustained practices and expressions of extremely high levels of collective and interpersonal variants of violence persisted even after the country's first democratic elections in 1994.

As South Africa emerged from a state of global isolation and began to establish a multiracial democracy, the positioning of "violence" within a global context of what were then nascent public health approaches (Dahlberg and Mercy 2009) seemed important for imagining a democratic future. The country joined a global groundswell of public health scholars that put the prevention of violence on the world's health agenda (Bowman et al. 2015a, b). At the same time, multiple surveillance and reporting systems were established aimed at collecting and collating regional and national population data as well as on interpersonal and criminal violence (Butchart

et al. 2001). However, nearly 30 years after the end of apartheid, the country remains among the most violent in the world (World Bank 2020).

In this chapter, the authors use the South African case as a means to demonstrate both the potential and the limitations of a public health approach to violence. They show that, apart from the important scientific rigor offered by this framework, casting violence primarily as a health rather than a criminal justice or even a moral problem provides important political opportunities that potentially bind sectors through a common goal, namely, the improvement of human life. A public health focus on the population level using epidemiological tools, however, is perhaps so attuned to emphasizing distal, upstream risk factors and drivers, that the approach is not sufficiently geared to apprehend key social, moral, political, geographical, and interactional dimensions that constitute the *contexts* of violence itself. It is these latter defining characteristics of violence as a social interactional practice in context that are far better appreciated, studied, and theorized by the social rather than health sciences (Bowman et al. 2015a, b).

Using South Africa as an information-rich case, the authors suggest that combining the powerful epidemiological data that describes violence as a disease at the population level with the granular detail required to understand violence as a form of fundamental social interaction is required to move violence scholarship forward. The chapter begins by briefly describing the emergence of the public health approach to violence in South Africa as part of a global health science impulse. It then explores the radical reconceptualization of violence that such an approach implied for thinking about interventions, before providing a brief evaluation of some of the limits of the approach. The chapter concludes with examples of studies strongly committed to the spirit of the social sciences that have attempted to build on the strengths of the public health approach and address its limits, and which may offer new opportunities for advancing the study of violence across the globe.

The Emergence of Violence as a Public Health Problem

The "problem" of violence in South Africa, like much of the region now described as the Global South, is tied to the logic of local resistance to European colonization, whereby indigenous people forcefully (and, ultimately, unsuccessfully) resisted the "murderous land-grabbing" practices of settler colonialists during the seventeenth and eighteenth centuries (Adhikari 2010). The resulting theft, dispossession, and disenfranchisement of indigenous black populations weakened African pastoralist societies and created new systems of land ownership and occupancy based along racialized lines. These racist (and also patriarchal) hierarchies extended to the restriction of personal and political rights of individuals and communities outside those of the settler migrants (Worden 1985; Mason 2003).

Coterminous with the rise of social sciences, discoveries of significant diamond and gold deposits in South Africa in the late nineteenth century saw the rapid development of industrial and urban sites where "European" and "African" individuals were suddenly brought together in closer proximity and higher densities. These

new social configurations prompted novel approaches to the application and documentation of violence, both as a disciplinary measure and a cautionary tale, where particularly young black men (most employed in the mines, and in factories) had to be contained and kept away from white society (Butchart et al. 1998). It was at these critical sites where the social sciences took root in explaining violence drawing on a conceptual framework shaped by the role of instincts and drives. Alongside the rise of these psychological and psychiatric accounts of interpersonal, urban violence were apprehensions of violence that took on a sociological hue. These more socially inflected conceptualizations of violence were largely grounded in the idea that urban life corroded the familial and group cohesion of migrant "African men" and so violent expressions were an inevitable consequence thereof (Dubow 1986). These forms of highly racialized interpersonal violence were gradually overshadowed by the spectacular displays of political violence that seized the consciousness of the country as it moved toward and then through legislated apartheid. During this period, black youth were cast as violent threats to the political project of whiteness and so clear lines were drawn that linked blackness with perpetration and whiteness with victimhood. Risk for violence remained distinctly racialized and overarchingly political, with even "criminal" acts viewed through the prism of collective threat (Bowman 2010).

Two interrelated processes were to move South Africa away from viewing the threat of violence as distinctly raced, political, and collective and further toward a disease model (Bowman 2021). The first was ironically apartheid statecraft and its "mania" for measurement (Breckenridge 2014; Posel 2017) through which the deployment of surveillance systems to measure health (and threats) set in motion an inclusive strategy that generated an aggregated population, which was to form the collective citizenry of the "new," democratic South Africa. The second was the thrust toward reconciliation and democratization of the state in the wake of apartheid's collapse. These processes recast South Africa as a fragmented society whose entire population had suffered in the aftermath of widespread and sustained political violence. In this way, all of the state's newly constituted citizens become vulnerable to risk and the political face of violence was reconceptualized through a public health lens that refocused its science on the vulnerabilities of victims rather than the psychology of perpetrators (Bowman 2021; Butchart et al. 1998).

So prevalent was the specter of violence in post-apartheid South Africa that it came to be seen as the pivot around which the success of the project of "nation-building through reconciliation" would largely depend. In fact, as early as 1990, the long-standing trope describing South Africa as being driven and sustained by a "culture of violence" – that is "a society which endorses and accepts violence as an acceptable and legitimate means to resolve problems and achieve goals" (Hamber and Lewis 1997, np) – began to find traction, and the prioritization of epidemiology as a way to measure its magnitude and risks for prevention was discernible in formative health policies of the time (Marks and Andersson 1990). The trajectory toward increasingly casting violence as a problem for population health gained momentum through extending "the eye of epidemiology [to] hospitals," "casualty wards, clinics, and mortuaries," which served as "observatories for monitoring the

demographic, personal, and situational determinants of violence" (Butchart et al. 1998, online). Instead of looking to violence as political, this "move framed apartheid not as systemic violence(s) but as a multidirectional contagion in which violence emanated from everywhere" (Bowsher 2020, p. 55). Within this newly constituted biopolitical dispensation, the markers of violence could be looked for – and found – everywhere, and were redefined as a fundamental threat to the health of post-apartheid South Africa (Bowman 2021).

The advent of the public health approach to violence represented a watershed moment in the history of understanding violence around the world but particularly in South Africa where the concept had been tethered to an intractable political stalemate. The medicalization of violence, thus, extracted it from a quagmire of moral loading and political polarization and placed it squarely alongside other forms of health threat that constituted a quadruple burden of disease. This reappropriation of violence was ideologically important and has markedly progressed our understandings of its multilevel correlates. However, the approach also decoupled violence from its inherently social and contextual framings, providing a partial picture of a complex situationally embedded, embodied, and interactional process with variable outcomes (Whitehead et al. 2018).

The Public Health Approach to Violence

The study of violence as a public health approach is underpinned by a prevention approach, as outlined by the World Health Organization (WHO), which is embedded in theoretical models that include the typology of violence and the ecological framework, and which aim to guide understanding, research, and action. The violence prevention approach is conceptually grounded in the WHO definition of violence, which 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 (Krug et al. 2002, p. 5).

The inclusion of the word "power" in the definition of violence allows for a broadened definition of violent acts beyond conventional understandings of violence to include acts of power such as threats, intimidation, and acts of omission (Dahlberg and Krug 2006). Indeed, this definition also encompasses all outcomes, such as physical and psychological harm, deprivation, and maladaptation. Dahlberg and Krug (2006) argue that defining violence only in terms of physical harm and death limits our understanding of the impact of violence on individuals, families, communities, and society. In this context, "power" can also be understood as a systemic feature, where unequal distribution of power and resources is directly linked to distributions of violence. Heath (2002, p. 726) notes that while "[a]ll social classes

experience violence [...] people with the lowest socioeconomic status are consistently at greatest risk."

The violence prevention approach is, in theory, interdisciplinary and evidence-based (Mercy et al. 1993) which allows public health to provide responsive and innovative answers to questions around violence (Dahlberg and Krug 2006). Ideally, this should draw upon multiple disciplines, such as medicine, epidemiology, psychology, sociology, education, economics, and criminology (Dahlberg and Krug 2006). That is, an integrated "violence prevention" approach requires collective action from researchers, practitioners, politicians, and civil movements, among other stakeholders, to enact a multi-sector approach to violence prevention (Bowman et al., 2015b) – it should be noted that such multidisciplinary approaches to violence prevention remain an ideal, and are not often the reality. The emphasis of these interventions and conceptualizations is directed toward collective health and well-being (Dahlberg and Krug 2006). Public health assumes that violence can be prevented and that we need to go beyond a reactionary approach after violence has occurred (Dahlberg and Krug 2006).

As with other public health issues, the public health approach to violence provides a framework in which to research the phenomenon, develop interventions and policy, and do advocacy work. The public health approach has four stages:

1. Gathering basic knowledge by systematically collecting data on the scope, magnitude, characteristics, and consequences of violence at local, national, and international levels.
2. Researching the causes, correlates, and risk factors for violence and factors that may be addressed through interventions.
3. Designing, implementing, monitoring, and evaluating evidence-based interventions to prevent violence.
4. Implementing proven interventions in a variety of contexts, disseminating knowledge, and determining the cost of these programs.

The typology proposes three categories of violence delineated by the characteristic of those perpetrating the violence: self-directed violence; interpersonal violence; and collective violence. Each of these categories can be split into sub-categories. Accompanying these categories are descriptors of the nature of the violence. Self-directed violence can be understood as violence where the victim and the perpetrator are the same person and can be split into suicide and self-abuse. Interpersonal violence is violence between people and can be divided into family and intimate partner (acquaintance) violence and community (stranger) violence. Collective violence is violence committed by a larger group of individuals and can be divided into political, economic, and social violence (World Health Organization, nd).

The public health approach and typology is accompanied by the well-known ecological model, which allows for an examination of the risk factors for violence across individual, family, community, and societal levels (Rutherford et al. 2007). The ecological model has been influential in determining and synthesizing risk

factors for violence globally to inform interventions across multiple societal sectors. In South Africa, the ecological model has been one of the predominant lenses for understanding gender-based violence (Gibbs et al., 2020). For example, a research project undertaken by the Centre for the Study of Violence and Reconciliation in 2016 found that gender-based violence is caused by an interplay between individual, community, cultural, religious, and economic factors, all of which act across various levels of society (CSVR 2016). The success of approaching the study of violence from an ecological model can be attributed to the recognition of the multiple nodes that encompass human life and the refusal to dislocate the individual from the structural. However, precisely how the links in the ecological chain are related in the production of violence is distinctly under-theorized. (Bowman et al. 2015a, 2015b).

While adopting the violence prevention approach has led to notable successes, interventions, and scholarship, there are some significant limits inherent in the current approach to the prevention of violence. Firstly, the public health definition of violence and typology is limited in a number of ways. For example, Galtung (1990) defines violence not only in terms of direct violence, which measures lives and years lost and focuses on violence committed by person(s) (see Galtung and Höivik 1971), but also in terms of structural and cultural violence. Here structural violence is defined as violence that is embedded within broader social systems that produce, maintain, and normalize inequality, oppression, marginalization, exploitation, and exclusion often along identity lines (such as race, class, gender, ability and sexuality) and kills slowly, undramatically, and anonymously (Galtung and Höivik 1971). Structural violence is historically, culturally, and context specific (Galtung 1990; Galtung and Höivik 1971). Galtung (1990) distinguishes structural violence from cultural violence, which he refers to as symbolic aspects of culture – such as art, religion, ideology, and science – that serve to justify direct or structural violence (Galtung 1990). Conversely, the current typology of violence does not examine violence committed through broader systems.

Secondly, while the use of the violence prevention approaches has been important and useful, there are gaps in its theoretical underpinnings. Ruttenberg (1994) argues that collapsing understandings of violence into drivers and risk factors fails to account for variation in the rates of violence. Later, Calhoun and Clark-Jones (1998) assert that the public health approach to violence does not sufficiently account for the role of complex variables, such as racism and classism, in violent outcomes. Jewkes et al. (2002) caution that the study of the role of complex variables is obscured through the arbitrary allocation of risk and protective factors to immutable ecological levels, while these factors may span several levels. Bowman and colleagues (2015) state that the persistent elevated levels of violence suggest that further theoretical and empirical work needs to be done as we are yet to understand how risk factors translate into the enactment of violence.

Ratele et al. (2010) argue that mainstream public health approaches do not sufficiently consider the social, economic, and ideological contexts in which violence occurs. Indeed, Van Niekerk and Boonzaier (2019) argue that the "cause and risk" language of public health research inadequately captures the complexities of

gender-based violence, and can act to pathologize already marginalized groups, and/or to dislocate this violence from its sociohistorical context.

The meaningful inclusion of social sciences in the study of violence as a public health problem offers multiple theoretical lenses to examine how violence is rooted within social systems. Ward et al. (2012) state that relying predominantly on health professionals will not be sufficient to answer complex prevention and intervention questions, and that an approach that integrates social science is imperative to develop a comprehensive violence prevention strategy that generates knowledge and effective interventions. Adopting a layered understanding of violence using the range of social sciences within the public health space allows us to not only count bodies or years lost, but also interrogate the conditions under which violence is produced and maintained.

Blind Spots and Data Deserts

A public health model for violence prevention works from the complementary human rights agenda that assures all the right to health and safety (Perry 2009), and which acknowledges that violence, in all its forms, creates or significantly contributes to a social burden, which can be measured in reduced health and well-being outcomes or access to resources. At the most linear, the latter might be illustrated as an individual who is injured through an act of interpersonal violence and requires medical attention or hospitalization as a result, which consumes potentially limited or costly (often shared) healthcare resources. This "burden" or social cost model also acknowledges that injury (and of course death) caused by violence can impact on a person's ability to work and earn an income, or to live without assistance; and/or that this may impact families or communities who depend on the injured party, or who are deprived of some benefit through the injury or loss. Violence also creates additional burdens for the state like increased costs for security, policing, prisons, and so on, and even the fear of violence can reduce the real or perceived quality of life. Within this, the public health framework typically models violence as a type of morbidity and/or cause of mortality, and aims to identify "treatments" that can reduce and prevent its incidence, much like with disease.

Rutherford et al. (2007, online) position the public health approach within the positivist scientific tradition, and describe it (with a note of caution) as tending to "focus on the forms of violence that are amenable to rigorous, quantitative analysis." This implies that less-amenable forms of violence may not be included – a phenomenon that feminist geographer Joni Seager (Civic Media 2016, online) described by saying: "What gets counted, counts. When it's not counted it's absent and invisible."

As indicated in the history of the emergence of violence as a public health problem, above, often what is counted as a "problem," and for whom, is typically shaped by the politics of a particular historical moment. Problem identification and risk assessment are, therefore, not value-neutral and apolitical processes, they are inherently politically inflected (Oliver 2006). "What *gets* counted" is also frequently related to what is most easily measured (which is not necessarily the same as what

needs to be measured or described), which implies an important ontological problem inherent in the conceptualization and attendant measurements of violence under a public health lens. These are foundational steps in the logic of the framework and remain a primary challenge and limitation of public health approaches to violence, particularly in high-crime countries where there is often inadequate infrastructure, and usually unequal access to resources that might further limit what or who gets to be counted and will similarly impact on the quality and frequency of any data that is captured, processed, and analyzed. In addition, in these contexts, there may be reduced or little transparency about data relating to populations, crime, violence, and justice. These features are common across many countries in the Global South, and can also be seen in the context of South African data.

In short, morbidity and mortality data is not generated outside of the political architectures that underpin governments (Armstrong 1986). A strong understanding of the mechanisms that underlie the production of vital statistics is critical to any data-driven study of violence. The ways in which the social, historical, and political dimensions of government impact on this is clearly evident in the case of South Africa, which is regularly ranked as one of the most violent states in the world (excluding countries experiencing armed conflict and war) and has a homicide rate nearly six times the global average (Africa Check 2018; UNODC, 2019).

While South Africa's high rates of violence are often positioned as an artifact of post-apartheid society, similarly high murder rates have been documented in the country since at least the 1970s (Kriegler and Shaw 2016). However, for most of this period (and indeed centuries before), data on black people's mortality was almost nonexistent despite black Africans making up around 75% of the country's population. Dorrington et al. (1999) found that, in the mid-1980s, only 56% of black male and 44% of black female deaths in South Africa were recorded, adding that estimates for other population groups (in South Africa typically categorized as white, Indian, colored, and Asian[1]) were also suspect. These "blindspots" were a side effect of the colonial and apartheid states' "politics of identification and surveillance" (Breckenridge 2014), which created multiple separate, parallel, and unequal population registration systems and bureaux. Other research (Brodie 2013; Brodie 2020a) has shown similar race-based disparities in the reporting and recording of violent crime under apartheid, with even crimes like murder being significantly undercounted in black townships, and statistics for the so-called Bantustans (black ethnic "homelands") kept separately if they were kept at all.

[1] The notion of race is problematic and should be understood as a social construct rather than a biological one. It is, however, an important factor for individual risk profiles for violence. Definitions of race in South Africa follow Apartheid-era conventions that may not have the same meaning as the same terms used in other countries or regions. "Black" or "African" is used to refer to black Africans, as well as some mixed-race individuals; "Colored" is used to refer to a phenotypically diverse but culturally specific community of mixed-race origins, and is not used to refer to people who are simply mixed-race; in South Africa colored people may also choose to identify as black (Brodie 2021).

National data (both demographic and in terms of crime statistics) has only been collected uniformly across race groups after the country's first democratic elections in 1994, and even then there have been multiple disruptions. For example, between 1992 and 1998 mortality statistics excluded information on race (Flisher et al., 2004). Stigma and poor record-keeping contributed to a mass underreporting of deaths due to HIV in the 1990s and early 2000s (Bhardwaj, 2016). And, from 2000 to 2001, the country's police minister declared a moratorium on publishing crime statistics.

In an attempt to counter the resulting data vacuum, the South African Medical Research Council (MRC) established a National Injury Mortality Surveillance System (NIMSS) (Butchart et al. 2001), which collected data from medicolegal laboratories and state forensic laboratories so that it could provide more detailed information about fatal injuries in South Africa. NIMSS reports were initially provided for South Africa's major urban centers and these data were also included in subsequent National Burden of Disease studies for South Africa (Pillay-van Wyk et al. 2016).

While these independent counts on violence were valuable, the resultant homicide data contained limited information on the context of the murder. Later mortuary- and docket-based analyses of femicides and child homicides (Abrahams et al. 2013; Mathews et al. 2013) demonstrated the importance of gaining and integrating supplementary information from the criminal justice system to bring a greater contextual understanding to the epidemiology of these types of violence. Further studies such as those that conducted interviews with perpetrators of violence, or with communities affected by violence (Mathews et al., 2015; van Niekerk and Boonzaier 2019), provide additional insight to the same picture. However, such context-rich studies remain the exception rather than the rule within the public health literature on homicide in South Africa (Bowman et al. 2022). Understanding violence as being comprised of a complex social interaction shaped by situational contexts as well as upstream drivers has, thus, become a preoccupation for many social scientists in South Africa (Bowman et al. 2018).

A second feature that needs to be considered is that historical and legal definitions of what is counted as "violence" (and of course, as *criminal* violence) are also not static, and have changed over time. For example, 40 years ago marital rape was not a crime in South Africa but sexual intercourse between two men was. Until 2003, South African law also only recognized rape where a vagina had been penetrated by a penis (other forms of non-consensual penetration were described instead as indecent assault); this was subsequently amended to include all types of forced or nonconsensual penetration, and coerced penetration, as rape. What this means is that what is counted [as violence] *now* might not have been counted previously, or may have been considered under a different category, which contributes to the historic (and usually persistent) invisibilization of some types of violence, particularly violence experienced by black victims, with an overemphasis on other forms and other victims (i.e., white victims). Even the idea of who is and who is not an "intimate partner" (in the context of perpetration of violence) might have more

fluidity or ambiguity in communities where there are concomitant issues like substance abuse and violent traditions of masculinity (Mathews et al., 2009).

What the South African data shows is that injury and mortality surveillance usually provides only one part of the violence picture; police statistics may provide part of another, but such a view should also acknowledge that many crimes are underreported and, in the case of South Africa, often poorly investigated. The most recent national femicide study produced by the South African Medical Research Council (Abrahams, et al., 2022) found that police dockets were missing in 9.1% of femicides in 2017.

Explicitly acknowledging the gaps and limitations of available data should inherently be part of the scientific method applied to the public health model, but this is not always the case – more specifically, while certain limitations might be acknowledged (e.g., sample size and so on), other known unknowns are often not recognized.

Bringing Context Back to Public Health Pictures of Violence

Faced with limited or often poor quality or unrepresentative data about violence, the solution is not to simply continue generating larger volumes of the same inputs but to identify new and supplementary sources and methods and indeed methodologies that might meaningfully add to the missing parts of the picture. In this way, a range of approaches steeped in social sciences traditions have attempted to augment the epidemiology model of violence that a public health approach has produced.

Work by Butchart et al. (1998) and Bowman (2010), among others, demonstrate the value of using critical social theory to explain the epidemiological patterning of violence by drawing on Foucault's (1977, 1982) theorizations of power and genealogical approach, respectively, to trace "historically distinct patterns" and conditions of possibility linked to various repertoires of violence. These approaches also allowed for the relationship between power, discipline, and violence to be considered as "productive" forces – even when evidently causing harm – and not only as destructive ones. Von Holdt (2014, p. 129) argues that South African case constitutes a "violent democracy," where "violence and democracy may be mutually constitutive."

Stevens et al. (2010, online) also look at how the problematic inception of the "apartheid archive" had created a narrative peppered with elision, which compromised the ability to study these archives from a present positionality, and suggested a broadening of inclusions – such as incorporating personal memory into the archive – in order to enable greater inclusivity and diversity and "surface new modalities and interdisciplinary ways of knowing and understanding." For Stevens et al. (2010, online), this approach was key to the "decolonisation [of] methodologies and processes," within which psychoanalytic models and practices could be applied, and this should be highlighted as another key driver for updating both the praxis and epistemology of the public health model.

Integrating Methodologies to Provide Rich Data and Context

The key to successfully integrating social sciences traditions into public health approaches to violence is not simply by under- or overlaying social science frameworks onto the study of violence and public health, but also through the application of scientific methods in the preparation of social science data – including what is often considered (or relegated to) qualitative data, so that these data can be available to and used by multiple practices and, most importantly perhaps, can be easily integrated with each other to yield a more complete picture of how, why, where, and when violence happens, and to whom.

As an example, a recent mixed-methods study of media reports of femicide in South Africa (Brodie 2019, 2020a) produced a database of more than 400 individual female homicides that took place in a single crime reporting year, and linked these murders to over 3200 unique news articles. These data could be compared with both the SA Medical Research Council femicide studies and annual police statistics, and revealed that fewer than 20% of female homicides were ever covered in local news media. The studies also showed that intimate partner violence was relatively underreported in media, and that news coverage of murders was heavily skewed by race and even the language of the news publication. These same data not only provide insight into public perception and how societies view certain crimes at certain points in time, but also offer granular details not available in any other statistical research – for example, about the names and the lives of victims and perpetrators of violence.

Social scientists have also drawn on a range of methods to provide greater resolution to crime statistics and epidemiological profiles, which might allow for more pointed intervention opportunities. A recent study (Bowman et al. 2022) of 3145 homicide cases harvested from a universe of 1,8-million robbery cases [which occurred between 2003 and 2014; data was drawn from the South African Police Services (SAPS) Crime Administration System (CAS)] demonstrated that robbery-homicide deviates from the temporal, victimological, and spatial dimensions that characterize South Africa's general epidemiology of homicide. Findings included that situational contexts, such as the presence of a firearm in a victim's home, or inside a place of business, "raises the stakes" of the confrontation and thereby increases the odds for a fatal outcome. The social sciences may, thus, offer public health a useful theoretical lens through which to understand and elaborate on the heterogeneities of violence. However, such data is not routinely available and for such ongoing contextualization to be useful. This type of information needs to be transparent and readily accessible.

A new wave of studies has also started leveraging the wide availability of digital recording devices to research violence in situ, that is, as it unfolds rather than how it is reported after the fact for counting or meaning making. The social sciences when fused with these new technologies in the study of violence represent an important move from the internal to the external situational factors that reflects an important shift from the privileging of personal characteristics and background factors in

instances of violence to privileging the process and unfolding of the violent conflict in situ (Jackson-Jacobs 2013).

Although all recording is mediated through selectivity, the sequences of recorded violence of different types that are either caught on CCTV or cell phone cameras and uploaded to public repositories provide important opportunities for a range of social scientific studies focused on the sequential and situational dimensions of conflict. This has great potential to advance violence studies. For example, this approach has shown that contrary to the overwhelming evidence generated by all types of self-reported studies, in 90% of cases a bystander will intervene in a brewing conflict, and that this finding holds across the very different contexts of Amsterdam, Cape Town, and Lancaster (Philpot et al. 2020). Moreover, a recent ethno-methodological-conversation analysis (EMCA)-based study demonstrated that, rather than being passively propelled toward violence by abstract risk factors, participants in violence seemingly orient to gender, alcohol use, and social norms in navigating conflict. This threatens the neat ontological distinction between distal risks and immediate enactments for violence (Whitehead et al. 2018).

The analysis of video data is amenable to a range of novel methods of analysis. For example, Systematic Video Observation and Analysis of Human Conflict (SVOA) synthesizes ethology, criminology, and anthropology to study conflictual human behavior (Lindegaard and Bernasco 2018). This method deploys a granular frame-by-frame analysis of CCTV videos, with a focus on sequences of interactions, gestures, and behaviors (microsociology and ethology) in order to better understand the unfolding of interactional factors that produce or constrain violent action. The coding of the gestures allows for the development of statistical models to predict the situational and interactional correlates of violence. This method has been used in violence studies that have focused on protests in the United States and Germany (Nassauer 2018), nightlife economy (Philpot et al. 2019), and bystander behavior in the United Kingdom, the Netherlands, and South Africa (Philpot et al. 2020).

A recent comparative study by Bombi et al. (2022) used "naturally occurring data" in the form of video footage from cell phones, YouTube videos, and tweets to examine how politicians and political parties iterated violence against women who were reporting on news stories in Brazil and South Africa. The themes identified by the analysis of the video footage reflect that the abuse experienced by female journalists is dynamic and systemic and includes both physical and structural enactments of violence and threat.

A separate Homicide Media Tracker project (Brodie 2020b, 2020c) being developed in South Africa also seeks to document and extract multiple types of homicide data from decades of news reports. When collected at scale, and systematically, the utility of this and other naturally occurring data can be explored at the macro-level – to theorize aspects of violence – and at the micro-level – to offer a granular explanation of violence. Both the macro- and micro-level are important in the public health approach to violence. The violence picture deemed fuzzy by Bowman et al. (2018) could potentially be (re)focused with the combination of approaches. Further, a more complete understanding of violence is an implicit requirement and imperative in order to fully achieve the theorized stages of the global public health approach.

As a further example, Ncube's doctoral study (in progress) will expand the use of this method to study gender-based violence in situ in South Africa and in the Netherlands. Such a comparative analysis will identify the ways in which sociocultural contexts shape the interactional moments that unfold to produce or constrain gender-based violence. These novel modes of generating new scholarship on the enactment of gender-based violence may provide invaluable information with which to explain and understand, rather than merely describe the roles of risk and protective factors for violence. Such contextual specificity can only add value to better understanding the contexts into which public health interventions are initiated and evaluated.

Conclusion and Future Directions

While it is often difficult to precisely disentangle the social sciences from the general logic and methods of public health, they have often been treated as distinct and distanced disciplinary perspectives (Krieger 2000). Often, it is the broader historical, social, and political conditions that most significantly calibrate their intersections and divergences. In South Africa, the public health approach to violence offered a new perspective on a problem that had been annexed by a range of social sciences used in the service of racism and division. The recasting of violence as a global health problem provided footholds for all sectors in the collective project of nation-building, and appeared to exchange the immoral security surveillance mechanisms of the apartheid state for a more equitable observation rooted in human rights and social equity. This prevention-orientated approach to violence has claimed notable successes, particularly in the conceptualization, study, and analysis of drivers of violence (Mitton 2019). Scholars from across the globe now have the tools to measure and compare the prevalence, magnitude, and correlates of violence at varying resolutions for tailored intervention, and these have informed growing evidentiary record of "what works" to prevent violence of different types.

However, as is evidenced by the South African case, being able to study "what works" is not equivalent to knowing what *will* work to prevent, obstruct, or mitigate the acts and effects of violence in a violent state. The authors hope that this chapter has also clearly demonstrated that in laying claim to violence as a preventable health burden, the approach has not conclusively forged the ideal, inclusive, and interdisciplinary strategy that it proposes. Its powerful focus at the population level necessarily abstracts the approach from the act of violence it studies. Yet violence is a fundamentally social (or at least socially impacted) interaction framed in time and space. The social sciences are, therefore, optimally equipped to bring social context back to an overly abstracted public health picture of violence. Meaningfully doing so will progress a more robust scholarship that fuses the epidemiological strength of a population-based approach with sciences explicitly committed to understanding the overdetermination of the social world in defining, studying, and solving the recalcitrant challenge of violence.

Despite ongoing attempts to address crime and violence in South Africa, over the last decade the country has also shown consistent, and recently steep, increases in major categories of violent or contact crime (which includes murder and attempted murder, sexual assault, and robbery; SA Government 2022). This should be seen in parallel with global disparities in violence outcomes when viewed by region, by income, and by income inequality. Reports from the World Health Organization (WHO n.d.) and the United Nations Office on Drugs and Crime (UNODC 2019) indicate that homicide rates in high-income countries have shown significant decreases over time compared while declines in middle- and low-income countries have been modest – for example, murder rates in Europe have declined by 63% since 2002 (UNODC 2019). In addition, the most recent UNODC *Global Study on Homicide* (UNODC 2019) suggests that there are further, and wide, disparities within these categories moderated by income inequality. This suggests that the conceptualization and attempted prevention and/or containment of violence as an "epidemic" may be playing out quite differently in different regions. It should also be recognized that homicide, while perhaps the easiest form of violence to measure or count, is only one indicator at the apex of a much more extensive injury pyramid, and both the undercounting and under-categorization of what constitutes violence, injury, and trauma remain a serious concern for data particularly in the Global South. As part of any project aimed at understanding or mitigating or reducing the impact of violence in these regions, both the categorizations of violence (what forms of violence are considered socially acceptable or unacceptable) and the enumeration of such acts (via official statistics, social surveys, media reports) also need to be reviewed, revised, and improved for local utility, not only so that data from poor countries can be compared with data from rich countries. Further, even local violence should be explicitly understood as a *global* public health crisis – i.e., violence and violent outcomes in one region may have impacts on other regions, not only in terms of impeded socioeconomic growth and continued reliance on donor aid, but even in terms of driving migration.

This chapter argues that, in addition to improving the collection and contribution of such data (which is long overdue), this must be done in tandem with a continued reconceptualization of how researchers define and understand violence. As Hamby (2011) has previously suggested, new waves of violence scholarship should focus more clearly on integrating empirical, epidemiological work with theoretically oriented frameworks. Social theory and social science methods and methodologies, when integrated with expansive data generated by epidemiological approaches, will therefore significantly advance current understandings of violence.

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