

# Is Criminal Violence a Non-communicable Disease? Exploring the Epidemiology of Violence in Jamaica

HA McDavid<sup>1</sup>, N Cowell<sup>1</sup>, A McDonald<sup>2</sup>

## ABSTRACT

*There is a high level of criminal violence that afflicts the Jamaican society. While it is certainly non-communicable in the context of medicine and public health, the concepts of social contagion and the well-established fact of the intergenerational transfer of effects of trauma raise questions as to whether or not it is non-communicable in a social sense. Historically, scholars have linked Jamaican criminal violence to three main roots: poverty and urban decay, political patronage, garrisonisation and more recently to a fourth, the growth in transnational organized crime (TOC). Traditionally as well, policy-makers have brought the three discrete perspectives of criminology, criminal justice and public health to bear on the problem. This paper applies a conceptual framework derived from a combination of epidemiology and the behavioural sciences to argue that a sustainable resolution to this looming and intractable social problem must take the form of a cocktail of policies that encompasses all three approaches at levels ranging from the community to the international.*

Keywords: Criminal violence, epidemiology, Jamaica

# ¿Es la Violencia Criminal una Enfermedad no Comunicable? Explorando la Epidemiología de la Violencia en Jamaica

HA McDavid<sup>1</sup>, N Cowell<sup>1</sup>, A McDonald<sup>2</sup>

## RESUMEN

*Un nivel alto de violencia criminal tiene lugar en Jamaica y las matanzas resultantes tiene un alto costo para la sociedad. Si bien no es ciertamente comunicable en el contexto de la medicina y la salud pública, los conceptos de contagio social y el hecho bien establecido de la transferencia intergeneracional de los efectos del trauma, suscitan preguntas sobre si tal violencia es o no comunicable en un sentido social. Históricamente, los estudiosos han vinculado la violencia criminal en Jamaica a tres raíces principales: la pobreza y la decadencia urbana, el patronato político, y la “garrisonización” o establecimiento de “barrios cuarteles”. Una cuarta raíz se ha añadido recientemente, a saber, el crecimiento del crimen organizado transnacional (COT). Tradicionalmente también, los diseñadores de políticas y los políticos han apuntado a la relación del problema con tres perspectivas discretas representadas por la criminología, la justicia criminal y la salud pública. Este trabajo aplica un marco conceptual derivado de una combinación de epidemiología y ciencias del comportamiento como base argumentativa de que una resolución sostenible a este inextricable y difícil problema social debe tomar la forma de un cóctel de políticas que abarquen los tres enfoques, desde el nivel comunitario al nivel internacional.*

**Palabras claves:** Violencia criminal, epidemiología, Jamaica

West Indian Med J 2011; 60 (4): 478

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From: <sup>1</sup>Department of Management Studies, The University of the West Indies, Kingston 7, Jamaica, and <sup>2</sup>Dean, Faculty of Medical Sciences, The University of the West Indies, Kingston 7, Jamaica.

Correspondence: Dr HA McDavid, Department of Management Studies, The University of the West Indies, Kingston 7, Jamaica. E-mail: hilton.mcdavid@uwimona.edu.jm

## INTRODUCTION

Jamaica is plagued by an epidemic of criminal violence and one of the most staggering features is the murder rate. With a mere 8.1 homicides per 100 000 in 1970 (1), Jamaica had by 2005 already been declared the murder capital of the world with a rate of 58 per 100 000 (2). The rate, however,

continued to climb, peaking at 62 per 100 000 in 2009. These dramatic developments have been attributed to a combination of poverty, urban decay, social exclusion (3, 4), political patronage and “garrisonisation” (5). Perhaps the most significant drive in the last decade or so has been the increasing impact of transnational organized crime (TOC) associated with such activities as illicit drug trafficking (6).

This paper briefly explores the recent evidence of an epidemic of criminal violence in Jamaica. It then advances a modified social-ecology model as a heuristic device on the basis of which an integrated, multi-dimensional and multi-disciplinary approach to addressing the causes and consequences of criminal violence can be explicated. The next section provides a brief outline of recent development in criminal violence and its impact on the health sector, followed by a re-examination from a social science perspective of the notion of violence as a non-communicable disease. The following section outlines a hybridized conceptual framework for analysing the problem of criminal violence and its impact. The paper ends with a brief discussion of the implications of this model for policy.

### CRIMINAL VIOLENCE IN JAMAICA

This paper focusses on interpersonal violence defined as “an act of violence inflicted by another individual or by a small

group of individuals” (1). The perpetrator of this violence could be a member of the victim’s family or intimate circle or someone from the wider community. The common feature of violent human behaviour is that it results in intentional or unintentional harm to others. We focus further on criminal violence, which is violence that is deliberately intended to be harmful, is expressly prohibited by the state and is, when committed, normally the subject of criminal sanctions (7).

In Jamaica, significant work has been done on describing the epidemiology of injuries and in documenting the burden they place on health services (1, 8). Table 1 illustrates the magnitude of the problem as it has manifested itself in the last five years. Between 2006 and 2010, murders averaged 1530 per annum for a rate of roughly 53 per 100 000. In April 2011, the government reported that there had been a 44% reduction in murders in the first quarter of 2011 compared to 2010 (9). The decline was explained by a combination of the “shock and awe” attached to the re-establishment of state control over the Tivoli Gardens community: a virtual state within a state run by a former “Don” and reputed drug kingpin, and the significant escalation in police activity following that operation (10).

Table 2 shows that the gun was responsible for the overwhelming majority (an average of 77%) of murders committed over the period under review. From Table 3, it is

Table 1: Major crimes committed in Jamaica 2006–2010

| Years | Major crime |                  | Murders |                  | Shootings |      | Sexual offences |      |
|-------|-------------|------------------|---------|------------------|-----------|------|-----------------|------|
|       | Total       | Rate/<br>100 000 | Total   | Rate/<br>100 000 | Total     | Rate | Total           | Rate |
| 2006  | 7241        | 271              | 1340    | 50               | 1341      | 50   | 1142            | 43   |
| 2007  | 7444        | 278              | 1583    | 59               | 1448      | 54   | 1220            | 45   |
| 2008  | 10 039      | 373              | 1618    | 60               | 1528      | 57   | 1459            | 54   |
| 2009  | 11 939      | 442              | 1682    | 62               | 1664      | 62   | 1273            | 47   |
| 2010  | 11 064      | 409              | 1430    | 53               | 1497      | 55   | 1206            | 45   |

Source: Organised Crime and Defence Policy Unit, Ministry of National Security, Government of Jamaica (GOJ), 2011.

Table 2: Implements used in murder for 2006–2010

| Types of weapon | 2006        | %          | 2007        | %          | 2008        | %          | 2009        | %          | 2010        | %          | Total       | %          |
|-----------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|
| Gun             | 1008        | 75         | 1249        | 79         | 1253        | 77         | 1290        | 77         | 1081        | 76         | 5881        | 77         |
| Knife           | 201         | 15         | 194         | 12         | 205         | 13         | 227         | 13         | 179         | 13         | 1006        | 13         |
| Machete         | 48          | 4          | 59          | 4          | 63          | 4          | 59          | 4          | 61          | 4          | 290         | 4          |
| Ice Pick        | 2           | 0          | 0           | 0          | 1           | 0          | 0           | 0          | 1           | 0          | 4           | 0          |
| Others          | 81          | 6          | 81          | 5          | 96          | 6          | 106         | 6          | 108         | 8          | 472         | 6          |
| <b>Total</b>    | <b>1340</b> | <b>100</b> | <b>1583</b> | <b>100</b> | <b>1618</b> | <b>100</b> | <b>1682</b> | <b>100</b> | <b>1430</b> | <b>100</b> | <b>7653</b> | <b>100</b> |

Source: Organised Crime and Defence Policy Unit, Ministry of National Security, Government of Jamaica (GOJ), 2011.

Table 3: Motives for murder 2006–2010

| Motives             | 2006        | %          | 2007        | %          | 2008        | %          | 2009        | %          | 2010        | %          | Total       | %          |
|---------------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|
| Drug related        | 30          | 2          | 22          | 1          | 17          | 1          | 28          | 2          | 11          | 1          | 114.34      | 1          |
| Gang related        | 436         | 33         | 799         | 50         | 736         | 45         | 882         | 52         | 374         | 26         | 3407.9      | 42         |
| Domestic            | 61          | 5          | 71          | 4          | 61          | 4          | 68          | 4          | 59          | 4          | 336.85      | 4          |
| Other criminal act  | 653         | 49         | 649         | 41         | 691         | 43         | 611         | 36         | 540         | 38         | 3312.8      | 41         |
| Not yet established | 160         | 12         | 42          | 3          | 113         | 7          | 93          | 6          | 446         | 31         | 881.11      | 11         |
| <b>Total</b>        | <b>1340</b> | <b>100</b> | <b>1583</b> | <b>100</b> | <b>1618</b> | <b>100</b> | <b>1682</b> | <b>100</b> | <b>1430</b> | <b>100</b> | <b>8053</b> | <b>100</b> |

Source: Organised Crime and Defence Policy Unit, Ministry of National Security, Government of Jamaica (GOJ), 2011.

noted that roughly 45% of murders were classified as gang or drug-related along with another 11% for which motives were un-established. The mix of drugs, gangs and guns suggests a heavy influence of transnational organised crime (6).

In 2006, the estimated direct medical cost of inter-personal injury in Jamaica was 2.1 billion Jamaican dollars, roughly 20% of the health budget, while the estimated productivity loss was approximately 27.5 billion Jamaican dollars (1, 11).

### VIOLENCE AND SOCIAL CONTAGION

There can be little doubt that the epidemic of criminal violence that has taken place in Jamaica over the last three decades qualifies as a severe pathology that spans both the social and medical domains. Whether or not criminal violence is truly non-communicable is another matter. Indeed, the notion of a non-communicable epidemic is in itself something of an oxymoron. How does a disease spread if it is not “communicable” in some sense? It is well established in social sciences that human beings are a product of their social environment. While violence is not communicable in the medical sense, studies of gangs and crowd psychology suggest that acts of aggression can be amplified and propagated by social contact (12). A casual observation of the impact of social networks suggests that physical proximity is not a necessary requirement for social contagion (13) and that depending on one’s perspective, the “virtual crowd” could be either a force for good or bad (14).

There is also copious evidence of intergenerational diffusion of violence. Scholars agree that children grown up in households marked by domestic abuse show a lower probability of sustaining functional family relationships as adults (15). Similarly, children exposed to violence at school and in the community manifest various dysfunctional behaviours including bullying and poorer academic performance (16, 17). Finally, there is evidence that the norms and values of Jamaican garrison communities characterised by intense dislike for the police (Babylon), “donmanship” (the substitution of criminal for state control of communities), deep devotion to political tribalism, a code of violent “histrionic” intimidation (“badness-honour”) and little apparent respect for human life are deeply entrenched, having trans-

cended the two or three generations since the 1960s (3, 5, 18, 19). Even in the context of a 40% decline in the murder rate since 2010, recent reports of beheadings of helpless victims suggest a more vicious enforcement of the codes of “badness-honour” by the current generation of murderers (20).

### THE CHALLENGE OF REDUCING VIOLENCE

A 2007 study concluded that if Jamaica (and Haiti) could reduce their homicide rates to the level of Costa Rica (about 7 per 100 000) then their growth rate could increase by 5.4% per annum (6). In this section, we adopt an approach similar to that of Runyan (21) and integrate a conceptual model originally developed by epidemiologists for the management of injuries from accidents with the famous social-ecology model developed by Bronfenbrenner (22, 23). The now well-known epidemiological triad originated with Gordon who observed that any injury, regardless of source or impact, is a combination of at least three sources: the host (the person or group affected by the violence), the agent (the source or mechanism through which violence is transmitted) and the environment in which host and agent find themselves (24). When applied to criminal violence (with the term “victim” used in the place of “host”) the triad can be represented by Fig. 1 (25).

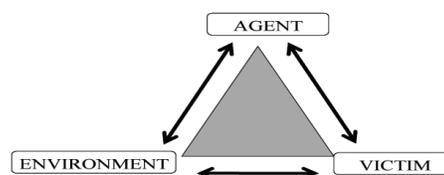


Fig. 1: The epidemiological triad

Source: Songer (25), McEwen (26)

Bronfenbrenner’s (22) model focussed on the impact of the environment on the development of human beings (27). The social-ecology model identified four dimension of environmental impact on human development as both evolved over time. Similar to Fig. 2, Bronfenbrenner (22) conceived of his model as a series of “nested structures, each inside the next, like a set of Russian dolls” (p 3).

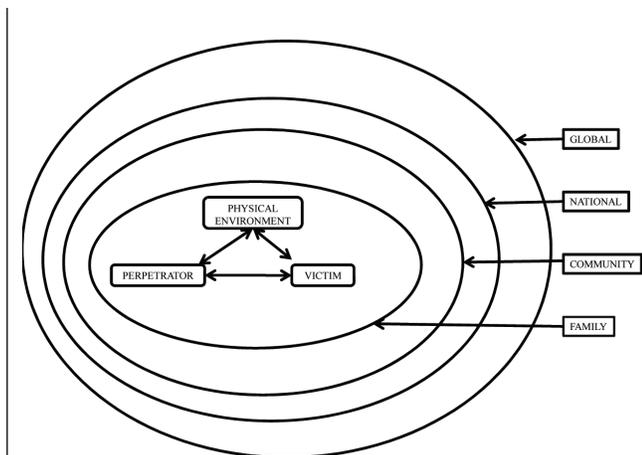


Fig. 2: The integrated social ecology model adapted to the problem of criminal violence.

Source: Adapted from Runyan (21)

The hybrid model presented in Fig. 2 integrates the epidemiological triad with the ideas of Bronfenbrenner to create a conceptual model for exploration and policy-formulation around the problem of criminal violence in Jamaica. The model adopts Gordon’s (24) view that a source of injury (in this case criminal violence) must be understood from the perspective of the host (the victim), the agent (perpetrator) and the environment. While Gordon (24) and later Haddon (28) focussed on the physical environment, an application of their ideas to the broader issue of criminal violence requires focus on both the physical and the social environments. Recognizing the diverse determinants and outcomes of criminal violence, the social environment is accordingly conceived at four levels ranging from the interpersonal level of family relationships and structures to the global level as manifested, for example, in transnational organised crime.

The integrated social-ecology model facilitates an application of the classic Haddon’s matrix to the broader problem of generalized systemic criminal violence and its traumatic consequences. Table 4 provides an indicative list of the kinds of questions that could be raised in the context of an approach to research and policy-making informed by this model. Questions of this type could be raised at all levels of the model from the family/interpersonal to the international.

**DISCUSSION**

The key implication of this analysis is that any single-dimensional prophylactic approach to resolving the problem of criminal violence in Jamaica is likely to fail. In truth, crime and criminal violence present as a rather messy organic mix of community, national and international influences that do not fit neatly into the traditional disciplinary frameworks of criminal justice, criminology or public health. As is the case with most aspects of reality, criminal violence and its disabling public health impact reflect a complex multi-dimensional problem that has its historical roots in society, politics, economics and the physical environment. As such, a sustainable approach will involve collaboration between the police and the military, the broader medical establishment and the extended community of social policy practitioners.

We have argued for a multi-disciplinary approach to policy that integrates the methods of public health (the epidemiology triad) with those of the behavioural sciences (Bronfenbrenner’s social-ecology model). Such an approach would go beyond public health, criminology and the justice system to encompass broader social, economic and political interventions. Within this expanded analytic framework, we endorse the classic Haddon’s matrix as a useful heuristic device for brainstorming and bringing the ideas and solutions of multiple disciplines to bear on the problem of crime and criminal violence.

Table 4: The Haddon matrix applied to the problem of criminal violence

|                   | Victim   | Perpetrator  | Physical environment  | Social environment  |
|-------------------|--|--|---|---|
| <b>Pre-event</b>  | What steps can be taken to minimize or prevent violent victimization?  | What steps should be taken to limit the development of tendencies towards criminal violence in the population? | How should the physical environment be changed or configured to minimize the potential for criminal violence? | How should the social environment be changed or configured to minimize the potential for criminal violence? |
| <b>Event</b>      | What characteristics of individuals increase the probability that they will be victims of criminal violence? | What characteristics of individuals increase the probability that they will commit acts of criminal violence?  | What detective, retributive and rehabilitative facilities respond best to acts of criminal violence?          | What are the characteristics of the broader “social ecology” that promote acts of criminal violence?        |
| <b>Post-event</b> | What measures can be taken to “make the victim whole” after suffering a traumatic event?                     | What measures can be taken to ensure speedy detection, punishment and rehabilitation?                          | What kind of infrastructure provides the most effective response to one or a series of traumatic events?      | What social policy intervention best responds to one or a series of traumatic events?                       |

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