INTRODUCTION

Humanity has been plagued with violence for as long as history tells. Studies have indicated that no one ethnic group is more prone genetically to violent behaviour than the other. On the other hand, studies indicate that environmental factors have a lot to do with violent behaviour in humans (1). Whereas in lower primates, two definite types of violent behaviours have been recognized (predatory and affective violent behaviours), in humans, predatory violent behaviour is rarely seen. Predatory behaviour in lower animals involves deliberate stalking of another animal with an intent to kill; the primary purpose is to obtain food. Affective violence on the other hand is an intra-gender (male) type of behaviour primarily centred on the issue of dominance (2). Factors associated with violent behaviour in humans include, mental illness (including brain injury), chemical substance abuse including drugs and alcohol (3), and social factors such as overcrowding and poverty (4, 5). Violent behaviour in most instances is preceded by aggression or aggressive behaviour; it is therefore appropriate to review factors associated with aggression in children (if we are to believe that aggressive behaviour in adults is preceded in most cases by childhood aggression). Environmental factors associated with aggression, especially in children are intrauterine factors, isolation and neglect, physical abuse and pain and exposure to aggressive adults (1). The exposure of fetuses to high gonadal hormones has been associated with behavioural problems, including increased aggression (6). Isolation and/or neglect have been associated with poor peer relationships and the development of aggressive behaviour in children (7, 8). Aggressive behaviour can be learned through modelling by way of exposure of children to aggressive adults (9). Children who have experienced repeated pain infliction and physical abuse tend to be more aggressive than a comparable group of non-abused peers (7, 10).

The neurobiology of aggression/violence is currently explained by one or a combination of theories including the modulation role of the hypothalamus, amygdalic-limbic system and the pre-frontal cortex (11, 12); also mentioned are lesions of the frontal cortex (dorsolateral convexity or orbital areas) (13, 14), and in some instances brain chemical dysregulation involving brain neuroamines (15). Research indicates that high testosterone level in humans is related to violent behaviour (16). Except for the genetically determined Prader-Wilson syndrome (17) (which is frequently associated with violent behaviour as part of the clinical manifestation), there is no concrete evidence for genetically determined violent or aggressive behaviour per se. The presumption of association of certain chromosomal abnormalities (XY or XXY) with aggression/violence, has been ques-
Multifactorial determinants of aggression and hence violent behaviour are mentioned (18). It can be concluded from the above facts that the determinants of aggression and hence violent behaviour are multifactorial.

On the other hand, a review of determinants of violence related deaths indicates a relatively high percentage of environmental related factors, including lifestyle related behaviours (1). Environmental determinants of societal violence and hence violent incidents can be conveniently classified under two broad categories, intentional and non-intentional factors or determinants (19). Non-intentional determinants of violent related incidents include motor vehicle related injuries/deaths, drowning, fall related injuries/deaths and fire injuries. Intentional violence generally includes homicides, suicides and all other premeditated or impulsive acts propagated by humans that result in injury to other individuals.

Jamaica is not isolated from the determinants of aggression or violence. Beginning with gender-based violence, women in general tend to fall victim to their male partners (21). The same authors report that 1994 data showed “one out of every eleven Jamaican women aged 5–60 years was subjected to an act of physical violence perpetrated by a man, compared to one out of every fifteen Jamaican men”. These rates are considered among the highest per capita in the Caribbean. The under-reporting of incidents of violence against women compounds this problem along with the perception widely accepted as part of the socialization process that “male against female violence is part of the conjugal process” (21).

Specific to the issue of societal violence are some social factors that have come over time to be recognized as the principal driving forces that continue to sustain violent incidents. These factors include poverty and what is described as “social deprivation” and the associated problems (5, 22). These authors among other Jamaican sociologists and social anthropologists agree that prior to attainment of independence, the level of societal violence was low and on par with other Caribbean countries. Following independence, beginning in the late 1970s, there began the waves of communal violence (especially in and around the corporate area) that has continued up to the present. These waves of violence have been attributed to the disintegration of family, increased migration, the emergence of community “warlords” or “dons”, the increasing illicit drug marketing and use, the increasing ‘gun running and hoarding’ in some communities and the alleged role of some politicians in fuelling and sustaining communal violence (5, 22). Despite police data indicating a decline in other crimes, stabbing and homicides continue to rise (23, 24). One newspaper article placed Jamaica on the top of the lists of countries with the highest homicide rate per capita (25).

The healthcare costs for violence related admissions according to a report by the Ministry of Health, Jamaica, is high per week compared to non-violence related admissions (26). It is clear that violence comes with a social price tag (loss of lives with resultant loss of caregivers and hence disruption of families), and economic losses in the form of disability related to productive years and work-hours lost and cost of medical care. All these losses can be summarily measured in terms of disability adjusted life years (DALY) for the purpose of health and social services planning and financing (27). Clearly, there is not only a social dimension to societal violence but equally important a public health dimension (28, 29). The questions that arise then are, what is the health community’s role in the prevention and control of societal violence in Jamaica? Is enough being done to prevent communal violence?

**PUBLIC HEALTH APPROACH**

In most western societies with problems of societal violence, multi-faceted efforts have been initiated to fight the problem. Communities have joined hands with law enforcement agencies, school boards and the health profession to come up with programmes geared towards containing the problem of violence (30–32). In the case of Jamaica, the public debate about societal violence has been mostly in the media between sociologists or journalists on opposite sides of the political spectrum (5). In other cases, the debate is between the general public and talk show hosts following a spate of killings in the community. Overall, the health community has not been in the forefront of this. This problem though is not specific only to the health community in Jamaica, but one recognized across the Caribbean health community (33). Considering the sociologic and healthcare costs of the societal impact of violence, it is imperative that a concerted action plan be initiated and championed by healthcare personnel. This is important from several points of view, as health personnel at all professional levels are held in high regard by the people in the communities in which they reside. Considering the political underpinnings of some instances of violent acts, especially in the disadvantaged communities, the voices of healthcare personnel will readily be heard without undue mistrust compared to that of the politicians in the community. At the national level health policies can be developed to guide planning, implementation and evaluation of programmes aimed towards preventing and containing societal violence. These can be in the form of general public health initiatives using surveillance data on violent occurrences to come up with piloted preventive programmes.

Health professionals can act in the capacity of technical resources to law enforcement agencies, the legislature, social service and other community agencies in drawing up policies to tackle the problem of societal violence. Additionally, they can help in drafting gun and assault weapons control legislation as well as educating the communities about the unwanted results of gun violence as done in other countries (30).

As noted by a top health official in the Caribbean region, the issue of violence “represents a serious and escalating threat to us all” (34). With the numbers of killings
steadily rising (20, 24), and the total number of homicides for the year 2004 reported as 1469 (35), everyone is a potential victim; every additional preventive measure will come in handy. Healthcare professionals at all levels need to consider getting involved in measures for control and prevention of societal violence in Jamaica. This collective effort should not be limited only to doctors (36). Granted that concerns have been raised in the medical community about the problem of societal violence (36), and the Ministry of Health has initiated a project to collect data on societal violence in the corporate area of Kingston (37); more needs to be done in the area of violence prevention.

The public health importance of violence control is of worldwide concern, hence the decision of the 49th Congress of the World Health Assembly (WHA) to adopt a resolution on the prevention of violence as a public health priority (WHA resolution 49, 25), (38). A public health approach to curbing societal violence in Jamaica, as in similar approaches worldwide stresses the prevention of violence, and “a rigorous requirement of the scientific methods with its four key components” (38). The control of societal violence will definitely contribute to an improved quality of life for all and hopefully a reduction in violence related deaths and healthcare costs.

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