Comprehensive assessment of youth violence in five Caribbean countries: Gender and age differences

Carolyn Gentle-Genitty
Jangmin Kim
Eun-Hye Yi
Douglas Slater
Beverly Reynolds
Natasha Bragg

2017

Journal of Human Behavior in the Social Environment

COMPREHENSIVE ASSESSMENT OF YOUTH VIOLENCE IN FIVE CARIBBEAN

COUNTRIES: GENDER AND AGE DIFFERENCES

Youth violence in schools is a major social problem, which affects not only youth

development but also broader communities across the world (Agnich & Miyazaki, 2013). Thus,

research on youth violence has increasingly been conducted in developed countries, particularly

the U.S., to examine the prevalence of youth violence and identify risk and protective factors for

youth violence. Previous studies have shown that male and older youth more frequently engage

in violence activities and youth violence is influenced by a broad set of risk and protective

factors, at multiple domains, including individuals, families, schools, and communities (Arthur,

Hawkins, Pollard, Catalano, & Baglioni, 2002; O'Brien, Daffern, Chu, & Thomas, 2013). Such

risk or protective factors at multiple domains tend to have the different strengths of effects in

different contexts and reinforce one another in influencing youth violence.

Both gender and age have been hailed as important factors in understanding violence and

crime (Weaver & Maddaleno, 1999). Previous studies report that there are differences between

gender or age groups in terms of the scope of violent activities, the prevalence of risk and

protective factors, and the effects of risk and protective factors on the violent activities

(Cleveland, Feinberg, Bontempo, & Greenberg, 2008; Fagan, Van Horn, Antaramian, &

Hawkins, 2011; Fagan, Van Horn, Hawkins, & Arthur, 2007; Herrenkohl et al., 2000).

However, there is relatively little understanding of youth violence in the Caribbean Community

(CARICOM) member states despite increased rates of youth violence. A small number of

studies have examined the prevalence of violence engagement and exposure (Ohene, Ireland, &

Blum, 2005) and have examined risk and protective factors affecting youth violence or gang

involvement in CARICOM member states (Katz, Maguire, & Choate, 2011; Maguire &

Fishbein, 2016; Maguire, Wells, & Katz, 2011). Most studies have examined youth violence in a particular Caribbean country, such as Trinidad and Tobago (Blum & Ireland, 2004; Katz et al., 2011; Maguire & Fishbein, 2016; Maguire et al., 2011). These studies have also focused more on risk and protective factors at a specific domain rather than multiple domains (Maguire & Fishbein, 2016; Maguire et al., 2011). Furthermore, previous studies provide limited information about how gender and age groups face different violence-related behaviors (e.g., engagement, victimization, witness, and reports to adults) and how they perceive different levels of risk and protective factors at multiple domains. Within the Caribbean as a developing country, cultural, social, and economic factors may influence different outcomes for youth violence as compared to other developed countries (Katz et al.2011). This may be explained by the fact that the "Caribbean is a diverse region of combined territories. Each country is highly diverse in terms of their political structure, population size, and level of development" (Maertens & Anstey, 2007, p. 1-2)

In light of these concerns, the major purposes of this study include: (1) comprehensively assessing the scope of the four behaviors (i.e., engagement, victimization, witness, and report) in relation to violence and youth's perceptions of risk and protective factors in family and school domains; and (2) examining how they differ by youth's gender and age. This study draws on assessment data on youth violence in five Caribbean States: Antigua and Barbuda, St. Kitts and Nevis, St. Lucia, Jamaica, and Trinidad and Tobago. The results of this study can provide exploratory, but important information to better understand the scope and nature of youth violence in the Caribbean Community and inform gender- and age-appropriate prevention to reduce youth violence in schools, which is tailored to their social and developmental characteristics.

Literature Review

Youth Violence in the Caribbean Community (CARICOM)

The Caribbean, along with Latin America, is a zone where crime and violence surge. Citizens of these territories are driven to address these issues as a priority for their social, economic, and cultural viability and security–despite overall civic distrust in their respective criminal justice systems (United Nations Development Programme [UNDP], 2012). Crime or violence in CARICOM Member States is characterized by homicides and wounding and is associated with the illicit drug trade, gang warfare, revenge and perception of disrespect.   Young men are disproportionally affected when compared with girls and younger boys (Blum et al., 2003; Katz, 2015; Katz & Fox, 2010; Ohene et al., 2005). According to the UNDP (2012), approximately six percent of youth may have been affiliated with a gang. Social factors associated with street gang involvement include high youth unemployment, a dearth of educational prospects, personal observation and experience with domestic violence, school, community, and societal violence, and inadequate civic focus on general youth advancement. Other venues of institutionalized violence in the Caribbean region include gender-based violence and organized crime –such as human trafficking and drug ventures (UNDP, 2012). The economic cost of crime and violence in CARICOM has been estimated at approximately 4% of its Gross Domestic Product.

Over the past few years, there has been an escalation of violence in a number of schools in the CARICOM region. According to the Caribbean Human Development Report on Citizen Security that reported school violence in the CARICOM, there have been suggestions that the acts of violence have become more brutal (UNDP, 2011). Underlying factors and causes are multidimensional. It is believed, however, that a major contributing factor stems from the levels

and patterns of violence in countries, communities, and families, which in turn reflect the prevailing political and socio-economic conditions, social attitudes, cultural traditions and values, and laws and law enforcement (Jones et. al, 2008).

Research data, media, and anecdotal reports reveal school-based violence in the Caribbean is more common in secondary schools; violent acts carried out in this environment include bullying[1], fights, vandalism, sexual assault, and homicide. School-based violence occurs between students, including groups of students or gangs from other schools; teachers and students; and sometimes teachers and parents. Self-defense, self and peer protection, image profiling, and intimidation of others have been reported as reasons for engaging in acts of violence in schools (UNDP, 2010). Weapons used to carry out acts of violence include knives, guns, scissors, and clubs; additionally, boys are more likely to girls to be victims and perpetrators of school violence (Schäfer & Korn, 2002; Sebastião, Tomas de Almeida, & Campos, 2002). Generally, transgressors and victims of youth violence are predominately males, and they often use violence as socially learned form of conflict resolution in a male-dominant context observed in broader community upheavals (UNDP, 2012).

Violence in schools has long-term negative effects on children and youth, the family and the community (Morotti & Roberts, 2000). School-based violence has been associated with decreased academic achievement and lower quality of life for students and staff alike. Specifically, violence in schools leads to a decline in school performance. These outcomes include a decline in reading achievement at Grade 12, an increase in student drug use, an

---

[1] A student is being bullied or victimized when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other students. Teachers and staff can also bully students, often in the guise of discipline or punishment.

increase in threats and injuries to public school teachers, and an increase in teachers reporting that disruptions in their classrooms interfere with their teaching (National Education Goals Panel Report, 1998). Similar reports and studies reveal a decrease in high school graduation, poor school attendance, and consequently poor performance among students who have been victims of bullying, and attrition of teachers from school in volatile communities. In the long term, school-based violence left unchecked or unresolved leads to stymied progress and or reverses in sustainable development.

Economic, Social, and Cultural Characteristics of the Caribbean Countries

    Economy.

The World Bank (2005) reports that though the number one social issue in CARICOM is crime, slow economic development is the second factor. Yet it is known that there is more spent on national security than on social welfare, thereby suggesting that the response is not merely political will (Kambon & Henderson, 2008). The rationale for this is clear when we examine the direct costs associated with crime and youth on youth violence. From a Caribbean report by the World Bank (2003), eight top costs are presented:

- Arrest, prosecution, detention of criminals

- Property loss and damage

- Medical costs, public programs for victims, and lost income of the victim

- Intangible costs (pain, suffering, and quality of life)

- Security costs

- Lower tourist receipts

- Lost income due to incarceration

- Loss of social capital (as cited in Maertens & Anstey, 2007, p. 41).

Different socialization and disparity based on age.

Violence is an acculturated process in the Caribbean often beginning very early in their childhood development. Starting earlier in life is an emerging form of harassment/violence being witnessed among Caribbean youth both in and out of school: electronic aggression. The US Centre for Disease Control (CDC) views electronic aggression as an emerging public health problem. Plummer and Geofroy (2010) add that these new forms of socialization and less direct supervision has affected the lives of young males. They stated that

> "Less supervision by adults and the increased influence of peer groups has had a strong impact upon the codes of masculinities that many boys aspire to and play a central role in policing which masculinities are considered acceptable. There is a potent combination of obligations for boys to act like "real men." Pressures to eschew roles discredited, as soft, gay, or feminine seems to be driving young men towards dangerous, risk-taking hyper-masculinities. The net outcome of these processes is for violence and crime to be increasingly seen as a primer ways of proving one's manhood in front of those who matter to boys: their peers (p.1)."

Plummer and Geofroy (2010) postulate that in the scheme of boyhood development, school is where they define themselves as males, and this definition "reflects social conventions, personal agency, and group identification" (p.7). The authors go on to articulate that,

> "Through this dual system of obligation and taboos, hyper masculinities are positioned as the ultimate expression of manhood and are seen by boys as a sure way of earning status. By enacting those, boys can prove their masculinity publicity (and that is what counts), while simultaneously disavowing any links with femininity and homosexuality

'tried on for size. … As such getting it wrong can result in severe loss of face and heavy social sanction" (p. 7).

In the US, African Americans boys in the juvenile justice system are three times more likely to be arrested than white youth (Huizinga et al., 2007). African American boys experience more contact with disproportionality, are in confinement longer, and or face harsher consequences than compared to their counterparts (Huizinga et al., 2007; Iguchi et al., 2005; Piquero, 2008). In fact, the Office of Juvenile Justice and Delinquency Prevention (OJJDP, 2002) explicitly acknowledges the issue of disproportionate minority confinement within this population. Several studies on the disposition and confinement process show that Black youth in the system are given more restrictive dispositions compared to white counterparts even when the same offense and prior record are assessed (Piquero, 2008). When youth of color do not succeed in school, the juvenile justice system often becomes the default service. The term school to prison pipeline aptly describes the path of many youth of color as they move from the educational system to the juvenile justice system. By a ratio of 1:3, in comparison to white boys, black boys are overwhelmingly sent to more correctional facilities instead of being assessed at mental health facilities (Huizinga et al., 2007; Iguchi et al., 2005).

Matrifocality.

Quinlan (2006) asserts that matrifocality is at the heart of the Caribbean social ecology pre-disposing boys to marginality. Clutton-Brock (1991) writes that this gender bias of parents towards their offspring has been observed in many areas in child rearing. Some noted aspects include breastfeeding, food allocation, medical care, parent-child interaction, and schooling (Cronk, 2000, Messer, 1997, Quinlan, Quinlan, & Flinn, 2005). The CARICOM social ecology boasts,

"[…] strong reciprocal bonds between mothers and daughters who often form the core of households. [As such] many young men with few options enter their thirties in a state of suspended adolescence in which they are unattractive as mates because they lack economic viability. They become household satellites who are sometimes helpful but more often neutral or even a strain on family resources. The volatile mix of poverty and rum reinforce matrifocal bonds that could alienate boys from the core of their family" (Quinlan, 2006, p.472).

Despite perception of parents engaging in these practices of mothers favoring girls and fathers favoring boys, or where girls are held under tighter reigns than boys by mothers, research suggest that some of this may be more tolerance towards boys than irrelevance of boys in the family milieu (Barrow, 1999; Sargent & Harris, 1992; Quinlan 2006). Thus, as daughters are sheltered and protected, sons are pushed to fend for themselves, socialize with alcohol in an alcohol tolerant society, and to engage in more problem behaviors as rites of passage (Quinlan, 2006).

Theories of Youth Violence

To understand the context of CARICOM, we need a theoretical lens to organize the information and experiences. Five theories are prominent in understanding risk and protective factors of youth violence: resiliency, social control, social cognitive and social learning, strain, and social disorganization. The interrelatedness of these concepts can be interpreted from general principles of system, ecological, symbolic interaction, strengths perspective, multiculturalism, attachment, and empowerment theories. The latter theories set an organizational context recognizing that individuals and groups interact in a set of systems and subsystems including peers, family, school, neighborhood/community, and government. Thus, strengths and resources

are directly related to the strength of each ecological interaction and transaction in which they participate. As such, the beliefs and interactions were based largely on their perceptions of right or wrong, or the value and purpose of each system in meeting specific needs (symbolic interaction); this also affects the perceived strengths they possess or gleans from certain systemic interaction (Corcoran & Nichols-Casebolt, 2004). This also affects the perceived strengths they believe they have or glean from interacting within any given system. This is believed to be mitigated by their belief of power and resources they have in and outside such system in their daily survival (empowerment) as they operated in their systems of influence albeit distal (far) or proximal (close) (Gentle-Genitty, 2013).

With this contextualization of the undertone of the work, Resilience Theory frames the assessment in its epidemiological organization of examining risk and protective factors. This allows for the examination of different types of resilience grouped by risk and protective factors with the belief that by identifying these factors and reciprocal influences caused through an additive or moderating effect, one can disrupt risk chains to affect individuals as well as communal change. The Resilience theory offers an organizational framework to help forecast how healthy systems recover and face risk as observed in human behavior (Bernard, 2014; Corcoran & Nichols-Casebolt, 2004; Smith-Osborne, 2007; Ungar, 2013). The theory of social control helped to determine factors of social bonding influencing risk and protective factors to infuse forms of formal and informal control by persons in various systems (Hirschi, 1969). Social control theory is the major theory used in understanding delinquent behaviors. It was considered the first theory to examine school social bonds as a primary predictor of delinquency (Eith, 2005; Hirschi, 1969). Social cognitive or social learning theory examines the impact of rewards and punishment on behavior in a context of accumulated habits acquired through

reinforcement and modeling (Forte, 2007). It attempts to observe behavior learned directly and indirectly (verbal and symbolic) as one interacts with their environment (Bandura, 1971; Kytle, 1978). Strain theory examines goal setting and goal attainment repercussions. This theory provides an explanation of why an individual commits a delinquent act when needs and/or goals go unmet (Gentle-Genitty, 2013). The theory suggests that deviant behaviors --which go against societal norms—arise from some discrepancy between personal goal motivation and opportunities for goal achievement (Agnew, 1992; Aseltine, Gordon, & Gore, 2000; Brezina, Piquero, & Mazerolle, 2001). The final theory informing the work is social disorganization theory. This theory is concerned with society's ability to direct and control groups and individuals: where there are weak controls and enforcements, delinquency was increased (Spergel, 2007).

Risk and Protective Factors

In a report by Brathwaite (2009) for the CARICOM Commission on Youth Deviance (CCYD), youth focus group participants in Jamaica, Haiti, and Trinidad described risks "as actions that invited danger, or had potential for danger or harm […] taking a risk meant accepting a challenge hoping for success, or also sensation seeking [sic]" (p.10). Furthermore, youth have self-described contributing factors for risk-taking behaviors: social expectations, peer pressure, and parental involvement. Similarly, incentives to partake in risky behaviors range from gained community status or social position, to fulfillment of basic needs–such as money, sustenance, and shelter (Brathwaite, 2009). Many Caribbean youth are finding themselves apart of socioeconomically incapacitated communities, where risk-taking can offer excitement, as well as serve as an effective and socially gratifying means of helping themselves, family, and friends (Brathwaite, 2009).

Based on a wide range of theories discussed in the subsection above, major contributing risk and protective factors for violence in schools occur at the individual, family, school, and community levels. A complete review of all risk and protective factors at the multidimensional levels go beyond the scope of this study (see Arthur et al. (2002) and Wasserman et al. (2003) for more comprehensive review). This study focuses more on risk and protective factors at the family and school levels because family and school are the most important environments that affect youth involvement in violence. Several school characteristics have been identified as risk factors, including violent school environments, easy access to drugs and weapons, peer antisocial behavior, and other school-related risk factors (Arthur et al., 2002; Wasserman et al., 2003). In addition, many articles on youth violence in the U.S. have reported that domestic violence, maltreatment, a history of crimes, and family conflict are common risk factors for youth violence, while family attachment is a strong protective factor against it (Buka & Earls, 1993; Eisenbraun, 2007; O'Brien et al., 2013; UNDP, 2012). Other protective factors dissuading youth violence seem to directly counter many aforementioned risk factors; these include educational access, options for other systematic activities, positive parental guidance and family support, a firm sense of self-confidence, involvement in religion or spirituality, and children of their own (Brathwaite, 2009). School characteristics that encourage students' involvement and positive interactions have been consistently noted as significant protective factors (Arthur et al., 2002; O'Brien et al., 2013; Wasserman et al., 2003). Previous studies also show the complex and dynamic patterns of youth violence by students' demographics: In general, male and older youth often appear to be at-risk populations who have higher levels of risk factors and lower levels of protective factors leading to increased involvement in violence (Fagan et al., 2011; Fagan et al., 2007; Herrenkohl et al., 2000).

A small but growing number of research studies on youth violence in Caribbean countries have reported similar results with respect to significant risk and protective factors discussed above (Blum & Ireland, 2004; Katz & Fox, 2010; Maguire & Fishbein, 2016; Williams, 2013). Maguire and Fishbein (2016) found that a history of family antisocial behavior and parent attitudes favorable toward antisocial behavior were stronger risk factors for problem behaviors of youth in Caribbean counties (Trinidad and Tobago), though significant family protective factors were not found. In addition, Katz and Fox (2010) and Williams (2013) identified some significant factors affecting youth violence or gang involvement at the school level, including peer association, lack of positive interactions with teachers, the opportunity for prosocial involvement, and low commitment to school.

Some studies also suggest gender and age differences in youth violence and risk and protective factors in Caribbean contexts. Blum and Ireland (2004) found that school connectedness was a strong protective factor for reducing violent activities. Additionally, a larger number of risk factors were more likely to increase violent activities for males, whereas protective factors were more likely to reduce violent activities for females (Baum & Ireland, 2004). Similarly, Blum et al. (2003) indicated that different age groups had different factors for violent activities. For example, parental connectedness was a protective factor for youth younger than 16 years old, while attendance at religious services was a protective factor for those older than 16 years old. Still, there is little understanding of how the broad risk of youth violence and protective factors in multiple domains differ demographically in Caribbean countries.

Methods

Study Sample

In November 2013, the Caribbean Community (CARICOM) Secretariat with funding from the Kingdom of Spain embarked on a pilot project to reduce youth on youth violence in schools and communities in five CARICOM Member States, namely. The Project was developed out of the concern for the escalation of gang violence and other related forms of violence in schools and the surrounding communities. Antigua and Barbuda, St. Kitts and Nevis, Saint Lucia, Jamaica, and Trinidad and Tobago were identified as the five member states in which to pilot the project. Using a set of criteria, each country was asked to identify one high school perceived to be at-risk and of each high school, principals were asked to identify 10% of their student population to participate in the study. The selection of 10% was further delineated to ensure that the same percentage of boys and girls were included. From this group of students, 512 students completed the survey. Of the 512 students, 266 (51.8%) were females; 246 (48.2%) were males. 327 participants (65.7%) were in the 14-16 age group, 122 (24.5%) were in the 11-13 age group, and 49 (9.8%) were in the 17-19 age group. The largest ethnic group was black (n = 336, 69.3%), followed by mixed ethnicity (n = 105, 21.6%), and a small number of various other ethnic groups (e.g., White, Chinese, Indian). The majority of participants (n = 401, 80%) were living with their parents; the other students reported living with guardians (n = 37, 7.4%), grandparents (n = 28, 5.6%), or others (n = 35, 7%).

Data Collection and Procedures

Students' survey was used to gather information for the study during the summer of 2014. The principal investigator administered the survey in each school spending two days in each country. The survey was conducted using a 51-item paper-based questionnaire, which included items assessing youth violence or gang problems developed by the Office of Juvenile Justice and Delinquency [Used with approval] (OJJDP, 2009). This instrument by the OJJDP was heavily

consulted in its construction. About 75% of the standardized questions were used to form the survey template. (Two sets of questions were also included in the survey: the Adverse Childhood Experience study trauma scale (ACE) (Felitti, et al., 1998) and Perception of School Social Bonding (PSSB) Instrument (Gentle-Genitty, 2009). The overall instrument was first pilot tested with a sample set of students in Jamaica and then revised for the final use in the study of the five countries.

Measures

      Violence engagement, victimization, witness, and report. Participants reported whether they engaged in, were victimized by, were witnessed to, and reported any of the fifteen types of violence, respectively. These binary questions (yes=1, no =0) include: weapon carrying, fighting or wounding of students, gang recruitment, gang fights, drug use, drug sale, alcohol use, marijuana use, marijuana sale, sexual abuse, domestic violence, bullying, theft from classroom, theft or robbery by students, and graffiti/defacing of school property. Four violence-related behaviors– violence engagement, victimization, witness, and report— were calculated by summing up all items for each behavior, with higher scores indicating the multiple incidents of engagement, victimization, witnesses, and report.

      Family risk factors. Domestic violence/abuse was measured using three five-point Likert items (Cronbach's alpha = .70). This scale assessed how often participants had experienced domestic violence or abuse in their family. A sample item is "I had a parent or other adult swear, insult me, put me down, or humiliate me." The family history of violence and crimes was also measured with another three five-point Likert items, which assessed the extent to which they had lived with family members who participated in violence and crimes (Cronbach's alpha = .63). A sample item is "I lived with someone who was a problem drinker or

abused drugs." The average scores of each measure of risk factors were calculated with higher

scores representing the higher levels of risk.

School risk factors. Peer risk involvement was measured with a scale that assessed the

extent to which participants had close friends who had been suspended or participated in nine

different delinquent and violent activities (e.g., carrying weapons, selling drugs, gang

involvement etc.). All items were rated on a five-point Likert scale, and the Cronbach's alpha

for this scale was .91. In addition, four five-point Likert items were used to measure violent

school environment (Cronbach's alpha = .73). Participants were asked to indicate the extent of

exposure and witness to gang-related activities within their schools. A sample item is "gangs are

a problem in my school." Easy access to drugs and weapons was measured using a scale that

asked participants about their perception of easy access to marijuana, alcohol, crack/cocaine, and

guns in their schools. (Cronbach's alpha = .86). They were asked to rate the items on a five-

point Likert scale. The average scores of each school risk factor were used so that higher scores

represent the higher levels of risk factors.

Family protective factors. Family cohesion was measured using a scale that asked

participants about their perception of emotional bonding with family members (Cronbach's alpha

= .74). It consists of six five-point Likert items (e.g., "I feel that my family loves me"; "I spend

quality time with my family"). A higher average score indicates a more positive family

relationship with family members.

School protective factors. School bonding was assessed using the short version of the

Perception of School Social Bonding (PSSB) instrument developed by Gentle-Genitty (2009). It

includes ten five-point Likert items that measured attachment (2 items), commitment (2 items),

involvement (2 items), and beliefs (4 items). Cronbach's alpha for the overall scale was .70. A

total average score was used to represent the overall level of school bonding. Participants also

responded to a scale that measured the level of their participation in school activities (Cronbach's

alpha = .85). They were asked to rate how often they participated in seven different school

activities in the past 12 months, on a five-point Liker scale (e.g., school clean-up activities, life-

skills classes, mentoring programs). The availability of after school programs was measured

using a scale that asked participants how often the following after school programs were

available for them in their schools using a five-point scale: scouting, football, athletics club, 4-H

clubs, service clubs, drama/music/art clubs, and other. Cronbach's alpha for this scale was .70.

The average scores of each school protective factor were used so that higher scores represent the

higher levels of protective factors.

Data Analysis

Two statistical analyses were mainly performed to investigate the differences across

violence outcomes, risk factors, and protective factors according to participants' democratic

characteristics. A t-test was used for mean comparisons between females and males, while a

one-way ANOVA was used for the mean comparisons among three age groups: younger age

group (11-13), middle age group (14-16), and older age group (17-19). Post hoc multiple

comparisons with Scheffe were also conducted to test pairwise differences among the age

groups. If dependent variables did not meet the homogeneity of variances, a Welch F test was

employed along with the Games-Howell post hoc test.

<div align="center">

Results

</div>

Table 1 shows the comparison of the levels of violence engagement, victimization,

witness, and report by gender and age. Male students (M = 1.76, SD = 3.21) showed

significantly higher scores on violence engagement than female students (M = 1.13, SD = 2.65, t

= 2.33, p < .05). However, male students were less likely to report violence to adults in school

(M = 1.13, SD = 2.78) than female students (M = 2.15, SD = 3.75, t = -3.37, p < .01). There

were no significant differences between males and females in violence victimization and witness.

Among three age groups, older age students reported a higher level of engagement in

violence (M = 2.73, SD = 4.09) than both middle age (M = 1.30, SD = 2.74) and younger age

students (M = 1.12, SD = 2.63). The differences were statistically significant (F = 3.18, p > .05).

As compare with the younger age students (M = 4.16, SD = 4.23), middle age (M = 5.69, SD =

4.95) and older age students (M = 5.54, SD = 4.83) indicated that they more frequently observed

school violence (F = 5.36, p < .01). Finally, older age students reported higher scores on

violence victimization (M = 1.25, SD = 2.54), whereas younger students were more likely to

report school violence (M = 2.29, SD = 4.01) than other groups; but these differences were not

statistically significant.

[Insert Table 1]

Table 2 presents the results of risk factors in family and school domains. The first

column of the table represents the level of prevalence of overall sample. Domestic

violence/abuse appeared to be the most prevent family risk factor (M = 2.53, SD = 1.19), while

violent school environment was found the most prevalent school risk factor (M = 2.44, SD =

1.08). The table also indicates significant differences in these risk factors by gender and age

groups. Female students reported higher scores on all family risk factors. More specifically,

females were more likely to experience domestic violence and abuse (M = 2.66, SD = 1.24) as

compared with males (M = 2.44, SD = 1.44; t = -2.02, p < .05). Family history of violence and

crimes was also higher for females (M = 1.81, SD = .95) than males (M = 1.65, SD = .83) though

it was not statistically significant. On the other hand, males generally had higher scores on

school risk factors than did females. In particular, males reported significantly higher accessibility to drugs and weapons (M = 2.33, SD = 1.32) than did females (M = 1.76, SD = 1.09; t = 5.01, p < .001).

No age differences were found in family risk factors although older age students showed the higher frequency to report both domestic violence and family history of violence and crime (see table 2). However, older youth showed significantly higher scores on school risk factors. They were more likely to have peers who participated in delinquent behaviors (M = 2.35, SD = 1.17) than their younger counterparts (younger age: M = 1.64, SD = .91; Middle age: M = 1.85, SD = .94, F = 7.47, p < .01). Furthermore, older youth were likely to perceive that they have had easy access to drugs and weapons than younger and middle age groups (older age: M = 2.69, SD = 1.46; middle age; M = 2.07, SD = 1.18; younger age: M = 1.68, SD = 1.15, F = 9.87, p < .001).

[Insert Table 2]

Table 3 shows the results of protective factors in family and school domains. Family cohesion on average was 3.56 (SD = .95). For school protective factors, school bonding was the highest protective factor (M = 3.10, SD = .76) whereas school activity participation was the lowest (M = 1.87, SD = .76). There were no significant differences between female and male students in both family and school protective factors. In contrast, age groups had significant differences in family protective factors. As compared with the older age youth (M = 3.23, SD = .89), younger and middle age groups had higher levels of family cohesion (younger age: M = 3.56, SD = .95; middle age: M = 3.60, SD = .96, F = 3.35, p < .05). For school protective factors, middle age youth tend to report relatively higher scores on overall protective factors although there was an only significant difference in school bonding between middle (M = 3.15, SD = .78) and older age groups (M = 2.86, SD = .71, F = 3.65, p < .05).

[Insert Table 3]

Conclusion

This study aimed to explore the scope and nature of youth violence and compare risk and protective factors by gender and age in selected Caribbean countries based on an ecological perspective. In this study, male youth were more likely to engage in violent activities and less likely to report the incidents of violence to adults. Similarly, older youth reported higher levels of engagement and witness to youth violence. These findings are consistent with the previous studies' findings in the Caribbean (Blum et al., 2003; Katz, 2015; Katz & Fox, 2010; Ohene et al., 2005). Regarding risk and protective factors, no differences were found in protective factors between females and males. However, with regard to risk factors, female youth reported a higher risk of domestic violence/abuse whereas male youth reported more accessibility to drugs /weapon in school. This study also identified significant age differences in risk and protective factors. In general, older youth tended to have higher levels of risk factors particularly in school while they have lower levels of protective factors within both family and school.

The literature helps us understand that the results of this study have to do with the cultural milieu of the Caribbean. Males are brought up to be macho and express a tough exterior, fend for themselves, and engage in socialization activities that prove they are strong and indeed boys. This is not the same expectation of girls especially in a matrifocal society; In addition, age differences in the Caribbean economic, social, or cultural context suggest that children of school age more frequently face violence engagement, victimization, and witness as they are in a period of transition to adulthood (Weaver & Maddaleno, 1999). Age plays a critical and developmental role in responding to violence as it signals the time the youth is both testing and learning boundaries of what is appropriate for adulthood and determining measures to sustain livelihood.

These factors increase youth's involvement in health compromising behaviors such as violence, sex, tobacco, and alcohol (Blum & Ireland, 2004).

Some limitations of this study are worth highlighting. First, it should be noted that this study does not suggest causal relationships between risk and protective factors and youth violence. Although risk and protective factors examined in this study have commonly identified as having a significant relationship with youth violence, the impacts of some factors have not been clearly established particularly in the Caribbean contexts. For examples, Maguire et al. (2011) found that active participation in school activities, as a protective factor did not have positive effects on drug use or gang membership. Rather, it tended to increase gun ownership as opposed to the expected relationship. Furthermore, some studies suggest the potential possibilities that the impacts of certain risk and protective factors on youth violence may be differentiated by gender and age (Blum & Ireland, 2004; Blum et al., 2003). Future research should be conducted to examine if risk and protective factors in this study are significantly associated with youth violence as they are hypothesized and if gender or age moderates the relationships between risk and protective factors and youth violence. Second, although this study attempted to collect the data from five Caribbean countries, the results of this study should be interpreted with caution when applying them to other Caribbean regions, which were not included in the sample. Despite the commonality across Caribbean countries, different Caribbean countries also have unique culture, language, and socioeconomic conditions, which may make the results less generalizable. Thus, the development of violence prevention programs should be contextualized based on different social, economic, and cultural contexts (UNDP, 2012).

Implications for Youth Violence in the Caribbean

There are several implications for creating youth violence preventions and interventions in the Caribbean. First, the overall results of this study suggest that a comprehensive approach to addressing both risk and protective factors should be taken for preventing and reducing youth violence. Indeed, it is quite complex to understand relationships among or between risk and protective factors in predicting youth violence because they often interact, intersect, or reinforce one another (Fitzpatrick, 1997). Thus, focusing on multiple factors simultaneously can provide a more effective framework for violence prevention programs (Katz & Fox, 2010). To do so, collaboration among families, schools, and communities is required to successfully develop, coordinate, and deliver comprehensive and integrated programs (Eisenbraun, 2007; Katz, 2015). Moreover, youth participation in planning, implementation, and evaluation processes is vital to not only improving the effectiveness of the intervention, but also promoting youth empowerment (UNDP, 2012).

Second, youth participants reported that they confronted higher levels of school risk factors and lower levels of protective factors as compared to family risk and protective factors. These results are closely linked to the Caribbean's economic instability as a developing country. Caribbean schools and communities do not provide sufficient activities and programs to improve student development due to the lack of resources, which in turn leads to increased violence engagement and victimization (UNDP, 2012). H. Moestue, L. Moestue, and Muggah (2013) suggest that the effectiveness of school-based interventions has been more strongly supported by empirical evidence in Latin America and the Caribbean. Therefore, it would be beneficial to develop school-based interventions that improve safe school environments and provide students with easy access to positive school activities and programs.

Third, the results of this study suggest that violence interventions should be developed to address domestic violence and abuse for female youth. Although this risk factor has been commonly noted by the literature on youth violence in Latin America and the Caribbean, little attention has been given to the development of effective gender-based violence interventions (Moestue, et al. 2013). One example of such gender-based interventions can be found in Reid, Reddock, and Nickenic' (2014) intervention to prevent child sexual abuse in Trinidad and Tobago. This gender- and empowerment- based intervention included three core elements: (1) education to promote gender issues, (2) skills building for both adults and youth, such as interpersonal skills and facilitation skills, and (3) service provision to effectively address health issues, domestic violence, and sexual abuse. This intervention was found effective in increasing knowledge of child sexual abuse and enhancing community resources.

Finally, this study indicated that youth aged 17 or older tended to have higher levels of risk factors and lower levels of protective factors at both family and school domains. These results are not surprising given that older youth were more likely to engage and witness violent activities in this study. In particular, this study suggests some risk and protective factors that should pay more attention in developing violence interventions for older youth in Caribbean contexts. For example, violence intervention for older youth should focus on reducing peer risk involvement and access to drugs/weapons and increasing family cohesion and school bonding. Furthermore, early intervention would be equally important for preventing the long-term involvement of violence (Wasserman et al., 2003). Walker, Chang, Vera-Hernández, and Grantham-McGregor (2011) examined the effectiveness of an early child development program using longitudinal data in Jamaica and showed that participants reported less involvement in fights and violent behaviors in adulthood as compared to nonparticipants.

References

Agnew, R. (1992).

Agnich, L. E., & Miyazaki, Y. (2013). A cross-national analysis of principals' reports of school

   violence. *International Criminal Justice Review*, *23*(4), 378-400.

Aseltine, R. H., Gore, S., & Gordon, J. (2000). Life, stress, anger, anxiety, and delinquency:

   An empirical test of general strain theory. *Health and Social Behavior, 41*, 256-275.

Arthur, M. W., Hawkins, J. D., Pollard, J. A., Catalano, R. F., & Baglioni, A. J. J. (2002).

   Measuring risk and protective factors for use, delinquency, and other adolescent problem

   behaviors the communities that care youth survey. *Evaluation Review*, *26*(6), 575-601.

Bandura, A. (1971). *Social learning theory*. New York: General Learning Press.

Blum, R. W., Halcón, L., Beuhring, T., Pate, E., Campell-Forrester, S., & Venema, A. (2003).

   Adolescent's health in the Caribbean: Risk and protective factors. *American Journal of*

   Public Health, 93(3), 456-460.

Blum, R. W., & Ireland, M. (2004). Reducing risk, increasing protective factors: Findings from

   the Caribbean youth health survey. *Journal of Adolescent Health, 35*(6), 493-500.

Brathwaite, B. (2009). Report to the CCYD on a study on youth risk and vulnerabilities in three

   CARICOM territories. *Caricom Secretariat*.

Brezina, T., Piquero, A. R., & Mazerolle, P. (2001). Student anger and aggressive behavior in

   school: An initial test of Agnew's macro-level strain theory. *Journal of Research in*

   Crime and Delinquency, *38*(4), 362-386.

Buka, S., & Earls, F. (1993). Early determinants of delinquency and violence. *Health*

   Affairs, *12*(4), 46-64.

Cleveland, M. J., Feinberg, M. E., Bontempo, D. E., & Greenberg, M. T. (2008). The role of risk

and protective factors in substance use across adolescence. *Journal of Adolescent*

Health, *43*(2), 157-164.

Clutton-Brock, T. H. (1991). *The evolution of parental care*. Princeton, NJ: Princeton University

Press.

Corcoran, J., & Nichols-Casebolt, A. (2004). Risk and resilience ecological framework for

assessment and goal formulation. *Child and Adolescent Social Work Journal, 21*(3), 211-

230.

Cronk, L. (2000). Female-biased parental investment and growth performance among the

Mukogodo. In L. Cronk, N. Chagnon, & W. Irons (Eds.), *Adaptation and Human*

Behavior: An Anthropological Perspective (pp. 203-221). New York, NY: Aldine de

Gruyter.

Eisenbraun, K. D. (2007). Violence in schools: Prevalence, prediction, and prevention.

Aggression and Violent Behavior, *12*(4), 459-469.

Eith, C. A. (2005). *Delinquency, schools, and the social bond*. New York, NY: LFB Scholarly

Publishing.

Fagan, A. A., Van Horn, M. L., Antaramian, S., & Hawkins, J. D. (2011). How do families

matter? Age and gender differences in family influences on delinquency and drug use.

Youth Violence and Juvenile Justice, *9*(2), 150-170.

Fagan, A. A., Van Horn, M. L., Hawkins, J. D., & Arthur, M. W. (2007). Gender similarities and

differences in the association between risk and protective factors and self-reported

serious delinquency. *Prevention Science*, *8*(2), 115-124.

Felitti, V. J., Anda, R.F., Nordenberg, D, Williamson, D. F., Spitz, A.M., Edwards, V., Koss, M.P., & Marks, J.S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experience (ACE) study. *The American Journal of Preventive Medicine, 14*, pp. 245-258.

Fitzpatrick, K. M. (1997). Fighting among America's youth: A risk and protective factors approach. *Journal of Health and Social behavior*, *38*(2) 131-148.

Forte, J. A. (2007). *Human behavior and the social environment: Models, metaphors and maps for applying theoretical perspectives to practice.* Belmont, CA: Brooks/Cole.

Gentle-Genitty, C. (2013). *Building blocks for competency based theory application: Applying & evaluating human behavior theory using the S.A.L.T. model*. Dubuque, IA: Kendall Hunt Publishing.

Gentle-Genitty, C. (2009). *Tracking more than absences: Impact of school's social bonding on chronic truancy*. Germany: Lambert Academic Publishing.

Herrenkohl, T. I., Maguin, E., Hill, K. G., Hawkins, J. D., Abbott, R. D., & Catalano, R. F. (2000). Developmental risk factors for youth violence. *Journal of Adolescent Health*, *26*(3), 176-186.

Hirschi, T. (1969). *Causes of delinquency*. Berkley, CA: University of California.

Kambon, A., & Henderson, G. (2008). Exploring policy linkages between poverty, crime, and violence: A look at the three Caribbean states. ECLAC-Studies and Perspectives Series – The Caribbean – No. 8 United Nations, NY.

Katz, C. M. (2015). An introduction to the gang problem in the Caribbean. In A. Harriott & C. M. (Eds.), *Gangs in the Caribbean: Responses of state and society* (pp. 1-27). Jamaica: The University of the West Indies Press.

Katz, C. M., & Fox, A. M. (2010). Risk and protective factors associated with gang-involved

      youth in Trinidad and Tobago. *Revista Panamericana de Salud Pública*, *27*(3), 187-202.

Katz, C. M., Maguire, E. R., & Choate, D. (2011). A cross-national comparison of gangs in the

      United States and Trinidad and Tobago. *International Criminal Justice Review*, *21*(3),

      243-262.

Kytle, J. (1978). Social learning theory by Albert Bandura. *Contemporary Sociology*, *7*(1), 84-

      88.

Maertens, F., & Anstey, C. (2007). *Crime, violence, and development: Trends, costs, and policy*

      options in the Caribbean. Caribbean: United Nations Office on Drugs and Crime Latin

      America and the Caribbean Region of the World Bank.

Maguire, E. R., & Fishbein, D. H. (2016). The Influence of family characteristics on problem

      behaviors in a sample of high-risk Caribbean adolescents. *Family Relations*, *65*(1), 120-

      133.

Maguire, E. R., Wells, W., & Katz, C. M. (2011). Measuring community risk and protective

      factors for adolescent problem behaviors: Evidence from a developing nation. *Journal of*

      Research in Crime and Delinquency, *48*(4), 594-620.

Messer, E. (1997). Intra-household allocation of food and health care: Current findings and

      understandings – introduction. *Social Science and Medicine, 44*(11), 1675-1684.

Moestue, H., Moestue, L., & Muggah, R. (2013). Youth violence prevention in Latin America

      and the Caribbean: A scoping review of the evidence. *Norwegian Peacebuilding*

      Resource Centre. Retrieved from https://igarape.org.br/wp-

      content/uploads/en/2013/08/Muggah-Moestue-Igarape_NOREF_Youth-violence-

      prevention-in-LA-and-Caribbean_Aug-2013_FINAL.pdf.

Morotti, A. A., & Roberts, Jr., W. B. (2000). The bully as victim: Understanding bully behaviors

     to increase the effectiveness of interventions in the bully-victim dyad. *American*

     Counselling Association, 4, 148-156.

National Educational Goals Panel Report. (1998). Washington, DC. Retrieved from:

     www.negp.gov.

O'Brien, K., Daffern, M., Chu, C. M., & Thomas, S. D. (2013). Youth gang affiliation, violence,

     and criminal activities: A review of motivational, risk, and protective factors. *Aggression*

     and Violent Behavior, *18*(4), 417-425.

Office of Juvenile Justice and Delinquency Prevention. (2009). *Best practices to address*

     community gang problems: OJJDP's comprehensive gang model. Washington, DC: U. S.

     Department of Justice Office of Juvenile Justice and Delinquency Prevention.

Ohene, S., Ireland, M., & Blum, R. (2005). The clustering of risk behaviors among Caribbean

     youth. *Maternal & Child Health Journal, 9*(1), 91-100.

Piquero, A. R. (2008). Disproportionate minority contact. *Future of Children, 18*(2), 59-79.

Plummer, D., & Geofroy, S. (2010). When bad is cool: Violence and crime as rites of passage to

     manhood. *Caribbean Review of Gender Studies: A Journal of Caribbean Perspectives on*

     Gender and Feminism, 4, 1-17.

Quinlan, R. J., Quinlan, M. B., & Flinn, M.V. (2005). Local resource enhancement and sex-

     biased breast-feeding in a Caribbean community. *Current Anthropology, 46*(3), 471-480.

Quinlan, R. J. (2006). Gender and risk in a matrifocal Caribbean community: A view from

     behavioral ecology. *American Anthropologist, 108*(3), 464-479.

Reid, S. D., Reddock, R., & Nickenig, T. (2014). Breaking the silence of child sexual abuse in

      the Caribbean: A community-based action research intervention model. *Journal of Child*

      Sexual Abuse, *23*(3), 256-277.

Sargent, C., & Harris, M. (1992). Gender ideology, childrearing, and child health in Jamaica.

      American Ethnologist, 19(3), 523-537.

Schäfer, N., & Korn, S. (2002). Germany: Numerous programmes – no scientific proof. In P.K.

      Smith (Ed*.), Violence in Schools. A European Response* (pp.100-115). London:

      Routledge Palmer.

Sebastião, J. Tomas de Almeida, A., & Campos, J. (2002). A report from Portugal. In Smith,

      Peter (org). *Tackling violence in schools on a European wide basis*.

Smith-Osborne, A. (2007). Life span and resiliency theory: A critical review. *Advances in Social*

      Work, 8(1), 152-158.

Spergel, I. A. (2007). *Reducing gang crime: The little village project*. New York, NY: Oxford

      University Press.

United Nations Development Programme (UNDP) (2010). *Human development report. The real*

      wealth of nations: Pathways to human development. Retrieved from

      http://hdr.undp.org/en/content/human-development-report-2010.

United Nations Development Programme (UNDP) (2012). *Caribbean Human Development*

      Report 2012: Human Development and Shift to Better Citizen Security. Retrieved from

      http://www.undp.org/content/dam/undp/library/corporate/HDR/Latin%20America%20an

      d%20Caribbean%20HDR/C_bean_HDR_Jan25_2012_3MB.pdf.

Ungar, M. (2013). Social ecologies and their contribution to resilience. In M. Ungar (Ed.), *The Social Ecology of Resilience: A Handbook of Theory and Practice* (pp. 13-31). New York, NY: Springer.

United Nations Development Programme (UNDP). (2012). *Caribbean human development report 2012: Human development and the shift to better citizen security*. Retrieved from http://hdr-caribbean.regionalcentrelac-undp.org/images/PDF/caribbean_hdr_2012__summary.pdf.

Walker, S. P., Chang, S. M., Vera-Hernández, M., & Grantham-McGregor, S. (2011). Early childhood stimulation benefits adult competence and reduces violent behavior. *Pediatrics*, *127*(5), 849-857.

Wasserman, G. A., Keenan, K., Tremblay, R. E., Cole, J. D., Herrenkohl, T. I., Loeber, R., & Petechuk D. (2003). *Risk and protective factors of child delinquency*. Washington, DC: Office of Juvenile Justice and Delinquency Prevention.

Weaver, K. & Maddaleno, M. (1999). Youth violence in Latin America: Current situation and violence prevention strategies. *Pan American Journal of Public Health, 5*(4/5), 338-343.

Williams, H. M. A. (2013). Postcolonial structural violence: a study of school violence in Trinidad & Tobago. *International Journal of Peace Studies*, *18*(2), 39-64.

World Bank. (2003). *Caribbean youth development: Issues and policy directions*. Washington, D.C.

World Bank. (2005). Public sector transformation: Preliminary public opinion research survey in four OECS member states. Paper presented to the OECS Public Sector Reform Group, Eastern Caribbean Central Bank, St. Kitts.