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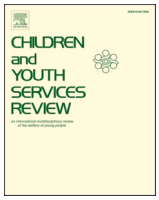

Delinquency, drug use, and gang membership in the English-speaking Caribbean

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ABSTRACT

In this study, the authors examine the prevalence of self-reported delinquency, drug use, and gang membership among school-attending youth in nine English-speaking Caribbean nations including Antigua and Barbuda, Barbados, Dominica, Grenada, Guyana, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, and Trinidad and Tobago. We also examine the frequency of these problem behaviors by gender and ethnicity. In doing so, we seek to gain an understanding of the extent and variation of delinquency and associated problems across the region and among subpopulations. The sample comprises more than 18,000 school-aged youth attending 306 schools. Our findings suggest that while offending varies significantly within and across the English-speaking Caribbean, youth engage in a disproportionate amount of violence when compared to other offense types, and though the current study is not cross-regional, youth appear to engage in substantially higher rates of violence than youth in other regions. Self-reported offending was higher among males than females for every offense type, though females in some nations reported more delinquency than males in other nations. In some of the study nations, there were no significant relationships between ethnicity and problem behaviors; however, in other nations, Afro-Caribbean, mixed, and youth from "other" ethnic backgrounds were significantly more likely to report problem behaviors than East Indian youth. Implications for future research are discussed.

1. Introduction

Caribbean nations experience some of the highest rates of violence in the world. Seven of the 20 nations with the highest homicide rates are located in the English-speaking Caribbean (i.e., Jamaica, St. Vincent and the Grenadines, St. Kitts and Nevis, the Bahamas, Trinidad and Tobago, Dominica, and St. Lucia) (UN Office on Drugs and Crime, 2021). Further, these countries have limited resources to combat problems, underscoring the importance of using evidence-based practices to respond to violence (WHO, 2015; Sutton & Rupra, 2017; Jaitman & Compeán 2015). Several international development organizations, such as the United States Agency for International Development (USAID) and the United Nations Development Programme (UNDP), have attempted to stem the tide of violence by directing substantial financial resources toward the region. These resources have been committed to implementing programs and practices to prevent youth delinquency (USAID, 2021; Katz, Harriott, & Hedberg, 2022) and the risk and protective factors associated with delinquency and associated problems (USAID, 2020).

Prior research suggests that the success of these programs depends on a strong understanding of where delinquency occurs, who engages in delinquency, and the types of delinquency that are occurring. In other words, the most effective programs target the people, places, and problems that are most troublesome (Andrews et al., 1990; Lum et al., 2011). However, delinquency and other problem behaviors in the Caribbean have been the subject of little research. The research that has been conducted has been carried out in individual Caribbean nations, most often Trinidad and Tobago and Jamaica (see, for example, Harriott & Katz, 2015). Very little research on delinquency, substance use, and gang involvement has been undertaken in the remainder of the English-speaking Caribbean and has not been comparative in scope or nature (Wells et al., 2010).

A few studies have relied on official data to examine the region's prevalence and patterns of delinquency. This research suggests that youth are disproportionately responsible for violence and that youth in some nations are more involved in violence than others. For example,

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Sutton and Rupra (2017) reported that while youth (aged 15–24) in both Barbados and Trinidad and Tobago were more likely to be arrested for homicide, the proportion of youth arrested for homicide varied by nation. In Barbados, youth comprised 16.1 % of the population but represented 24.4 % of homicide arrests. Similarly, in Trinidad and Tobago, youth comprised 10.8 % of the population but made up 33.3 % of homicide arrests.

While official police data are helpful for understanding crime and delinquency that comes to the attention of the police, prior research suggests that these data lack validity. For example, at best, only about 50 % of crimes are reported to police in the Caribbean (Sutton & Alvarez, 2015). In addition, these data lack comparability from one nation to another. Laws and recording practices vary between Caribbean countries, which results in inaccurate comparisons for most crimes (Katz, Walcott, Freemon, & delMistro, 2021). Likewise the utility of the data is limited because police agencies in the Caribbean lack the capacity to record, store, and disseminate official data, making it difficult to share information about various types of crimes with the public and policymakers (Katz et al., 2021). These limitations also make it difficult for researchers to access and use the data to differentiate the proportion of a nation's crime problems attributable to youth and the types of offenses for which youth are more likely to be involved.

The problems associated with the region's official crime data led the Inter-American Development Bank (IDB) to collect and analyze victimization data, which were collected from those 16 and older in the capital cities of five Caribbean nations using the Latin American Public Opinion Poll (LAPOP) survey and the International Crime Victimization Survey (ICVS) module (Sutton & Rupra, 2017). The results revealed that when compared to other regions, the Caribbean has by far the highest rate of violent victimization. In contrast, the Caribbean experiences a lower than average rate of victimization for theft (Sutton & Rupra, 2017). These findings suggest that the Caribbean might have a problem with violence, not crime in general (Yagoub, 2017). Further, recent research indicates that the especially high rates of violence might partly be explained by a combination of social structure and a culture of violence, which has permeated the region as a consequence of its legacy of colonialism (Katz, Fox, & Gill, 2019; Knight, 2019). Regardless of the causal mechanisms that might be at play, Sutton and Rupra's (2017) findings suggest that unique factors might drive patterns of offending in the Caribbean.

While their study primarily focused on adult populations, there is some evidence that the pattern of pronounced levels of violence, when compared to other types of crime, is also exhibited among juveniles. For example, Maguire and Fishbein (2016) administered an instrument comprised of items from the Communities that Care (CTC) Youth Survey to a sample of 2,552 students enrolled in public schools in Trinidad and Tobago. They reported that 12-month rates of violence were relatively high when compared to property crime. While 21.6 % of respondents reported that they had attacked someone with the intention of seriously hurting them and 4.2 % had used a weapon or force to get money or other material items from someone, only 11 % of youth reported engaging in minor theft, 6.1 % had gone into or tried to go into a building to steal something, and 5.8 % reported committing a major theft. Fox (2008), Lall (2007), and Seepersad (2014) reported similar findings on the incidence of violence and property crime.

Further, Gentle-Genitty et al. (2017) examined data collected from approximately 500 school-attending youth in five English-speaking Caribbean nations – Antigua and Barbuda, St. Kitts and Nevis, St. Lucia, Jamaica, and Trinidad and Tobago. Their study, to our knowledge, was one of the first to examine the correlations between self-reported violence and gender and age in the region.[1] They found that involvement in violence was substantially more widespread among males and older youth. Although insightful, the authors relied on a convenience sample from each nation and aggregated the data to the national level for analytical purposes. In addition, the authors did not report the incidence and prevalence of delinquency among their sample.

In terms of the type of problem behaviors, much of the research that has been conducted in the region has been on alcohol and drug use. Ohene et al. (2005) conducted one of the few region-wide studies on alcohol and drug use among school-aged youth, using a survey based on questions from the Minnesota Adolescent Health Survey and the Youth Risk Behavior Survey. Their study was perhaps the first to examine the prevalence of problem behavior by gender. They reported that males and older youth were more likely to drink alcohol, smoke cigarettes, and use marijuana (Ohene et al., 2005). Alcohol use ranged from 4.5 to 21.1 % for males and 3.1 to 11.1 % for females aged 10 to 18. Marijuana use was not frequently reported for both males and females. For youth between ages 10 and 12, less than one percent of males and females had used marijuana, but by ages 16 to 18, 7.4 % of males and 3.8 % of females had used marijuana. Related, Lall (2007) found among nine to eleven-year-old students in Trinidad and Tobago, 45 % drank alcohol, 7 % smoked cigarettes, and 2 % tried other illegal drugs. Males engaged in these behaviors at higher rates. More recently, also in Trinidad and Tobago, Maguire and Fishbein (2016) found that 72.7 % of youth had drunk more than a few sips of alcohol in their lifetime, and 3.1 % had sold illegal drugs.

In addition, Katz and Fox (2010), using an instrument based on the CTC Youth Survey, examined self-reported gang membership among a nationwide sample of school-attending youth in Trinidad and Tobago. Approximately 6 % of the youth reported being a current gang member, and almost 7 % reported being a former gang member (see also Maguire, 2013). Again, males (19 %) were more likely to report ever being in a gang than females (8.9 %). However, Ohene et al. (2005), who measured self-reported gang membership, past or present, among eight Caribbean nations and the British Virgin Islands, reported that gang participation was much more common. The authors administered a survey based on questions from the Minnesota Adolescent Health Survey and the Youth Risk Behavior Survey to 16 to 18-year-olds. They reported that about 24.2 % of males and 11.8 % of females self-reported ever belonging to a gang. These findings together suggest that the prevalence of gang involvement might differ by nation.

Except for the above, our review identified almost no peer-reviewed prior research on delinquency, drug use, and gangs in much of the English-speaking Caribbean, including but not limited to Antigua and Barbuda, Barbados, St. Kitts and Nevis, St. Lucia, Dominica, Grenada, Guyana, and St. Vincent and the Grenadines. Concomitantly, almost no prior research on problem behavior in the region has used a common methodological design, instrumentation, or analytic framework, all of which are necessary to compare findings between nations. It is unclear, therefore, whether countries in the English-speaking Caribbean are similar or different from one another and whether there is variation in the characteristics of those who engage in problem behavior. This is a significant oversight because research and understanding of these issues are necessary not only to understand the scope and nature of these problems but also to direct the needed finite resources to respond to the problems.

To be sure, Caribbean communities are characterized by "islandness," a cultural phenomenon resulting from islanders' lifelong experiences with physical isolation, curtailed social networks, and shared beliefs, interests, and behavior (Conkling, 2007). Scott and Staines

[1] The authors deployed an instrument that was based on items from the Adverse Childhood Experience (ACE) study trauma scale, the Perception of School Social Boding (PSSB) instrument, and other unspecified survey instruments used as part of the OJJDP's Comprehensive Gang Model project.

(2021) argue that because islandness necessarily results in unique forms of informal and formal social control, island communities can differ significantly in their scope and nature of deviance. By extension, we might expect differences in the scope and nature of delinquency between nations, which might require different explanations for offending and different policies and programs to respond to offending.

Research conducted in the region has also largely failed to examine how delinquency, drug use, and gang affiliation are related to ethnicity and gender to determine whether differences exist and, if so, the magnitude of the differences. There are several reasons why socio-demographic differences in problem behavior might exist. Each of the nations was shaped politically, economically, and culturally by its colonial past in which enslaved people from Africa and indentured servants from India were transported by the British to work on Caribbean plantations (Palmié & Scarano, 2013). Economic and social differences between the two ethnic groups soon followed emancipation, with East Indians gaining economic advantages because of the greater rights and privileges they had been granted upon arrival to the islands (Brown, 2020: 45). A limited but influential body of research shows that descendants of enslaved African people, now referred to as Afro-Caribbean have historically been denied opportunities and faced substantially greater oppression (Palmié & Scarano, 2013).

Seepersad and Wortley (2017) conducted one of the few studies on the role of ethnicity in crime in the English-speaking Caribbean. They examined police crime report and self-report victimization data collected in Trinidad and Tobago and found that the role of ethnicity in victimization varied by data source. Police data suggested that Afro-Caribbeans are over-represented as victims because they are victimized more frequently for almost all crime types. Victimization data, however, indicated a "more equitable distribution of crime victimization" (p. 99). The authors suggested that there could be many reasons for the disparate results, such as Afro-Caribbeans being more likely to be the victim of a serious offense, which are more likely to be reported to the police, or that Afro-Caribbeans are subjected to over-policing, which results in their over-representation in official crime statistics. The authors emphasized that to date, no research has examined differences in offending patterns by ethnicity due to the lack of available official and self-report data in most English-speaking Caribbean nations and that such research is needed before there is any examination of discrimination by criminal justice actors based on ethnicity.

While the literature on the relationship between gender and delinquency, drug use, and gangs has begun to emerge in the English-speaking Caribbean, it remains in its infancy. Understanding gender differences in problem behavior is important from a theoretical and policymaking perspective. Given the current state of the gender and crime literature in the region, it is unclear whether traditional theories of crime and delinquency might be useful to explain similarities and differences in offending between males and females (Travers, 2019); or whether greater emphasis should be placed on such issues as the role of gendered experiences with global inequalities and colonialization, and its differential impact on male and female offending patterns (Carrington, Hoff, & Sozzo, 2016). Additionally, understanding gender differences in problem behavior is important for understanding any disparate treatment of males and females by criminal justice officials and understanding how to allocate gender-responsive resources and programming.

The present study examines the self-reported prevalence of delinquency, drug use, and gang membership among school-attending youth in nine English-speaking Caribbean nations, including Antigua and Barbuda, Barbados, Dominica, Grenada, Guyana, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, and Trinidad and Tobago. We also examine the prevalence of these problem behaviors by gender and ethnicity. In doing so, we seek to gain an understanding of the extent of delinquency and associated problems across the region and among subpopulations within nations to determine whether there is variation in the occurrence of problem behaviors within and across countries. Below we discuss our methodological approach and findings and discuss the implications of the results.

2. Method

2.1. Setting

The present study relies on data collected from school-attending youth in nine English-speaking Caribbean nations. The nine nations include Antigua and Barbuda, Barbados, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines, located in the Eastern Caribbean; and Trinidad and Tobago and Guyana, located in the Southern Caribbean. While each of the study nations gained its independence from Britain since the 1960 s, they remain connected formally as Commonwealth nations and informally through a multitude of social, familial, and economic connections (Byron & Condon, 1996). All of the countries are considered small island developing states (SIDS) (OECD, 2018) and are characterized by geographic remoteness, high import and export costs, inadequate institutional capacity, high levels of poverty, and high "vulnerability to systemic shocks" (United Nations, 2021: 1). While the economies of the Eastern Caribbean nations and Barbados are largely reliant on tourism, the economies of the Southern Caribbean nations are primarily driven by the energy sector (Alleyne, 2021). These economies have facilitated service as international transshipment centers for legal and illicit commodities (Francis & Mauser, 2011).

The study nations vary in population size from approximately 46,000 residents in St. Kitts and Nevis to about 1.3 million in Trinidad and Tobago (United Nations, 2019). All of the nations are primarily comprised of Afro-Caribbean or mixed-race residents – varying from 91.1 % in Antigua and Barbuda to 96.7 % in St. Lucia—except for Guyana and Trinidad and Tobago. These two nations are an exception in that they are more ethnically diverse. Guyana is comprised of 49.2 % Afro-Caribbean or mixed-race residents, 39.8 % East Indian residents, and 10.5 % indigenous residents. About 60.7 % of residents in Trinidad and Tobago are Afro-Caribbean or mixed-race residents, followed by 37.8 % who are East Indian and 1.5 % from another racial group.

The diverse yet distinctive characteristics of the English-speaking Caribbean provide a unique opportunity to assess delinquency and deviance among school-aged youth. While the size of each nation allows for national assessments, their geographical proximity and shared cultural heritage also enable comparative analyses. Further, the current study focuses on a region with relatively recent growth in population and a large proportion of youth, combined with its development status, which provides an opportunity for theoretical and policy-relevant insights on delinquency beyond these nine nations. Below, we discuss the project design and instrumentation.

2.2. Design

Before data collection, a letter of explanation was provided to each nation's Ministry of Education, and conference calls were conducted to identify a ministry representative to serve as a liaison with the research team. As contact was made with each liaison, the research team requested a list of the names of schools in each nation, along with the number of youth enrolled at each school (if available) by form or grade. We used this information to determine sampling procedures, the number of surveys to be administered at the school level in each nation, and to calculate response rates. The liaisons also facilitated project-related activities and were responsible for administering or facilitating the administration of the surveys to the students.

The target population for the Caribbean School Youth Survey (CSYS) was Form 5 (i.e., 10th grade in the United States) secondary-school-aged youth who attended public schools. The number of public schools enrolling Form 5 students in the six Eastern Caribbean nations and Barbados was relatively small, ranging from 8 to 26 schools in each nation; therefore, we approached all public schools enrolling Form 5 students for participation in the study (see Table 1). In Antigua and

Table 1
School-level and individual-level response rates by nation.

Nation	School-level response rate			Individual-level response rate		
	Invited to participate	Agreed to participate	Response rate (%)	Enrolled individuals	Completed surveys	Response rate (%)
Antigua & Barbuda	11	11	100.0	981	806	82.2
Barbados	23	18	78.3	3,320	2,266	68.3
Dominica	15	14	93.3	959	835	87.1
Grenada	18	18	100.0	1,558	1,115	71.6
Guyana	89	89	100.0	6,068	3,825	63.0
St. Kitts & Nevis	8	8	100.0	675	474	70.2
St. Lucia	23	23	100.0	2,672	1,996	74.7
St. Vincent & the Grenadines	26	26	100.0	1,641	1,174	71.5
Trinidad & Tobago	128	99	74.4	9,189	5,821	63.4
Overall	341	306	89.8	27,063	18,312	67.7

Barbuda, Grenada, St. Kitts and Nevis, St. Lucia and St. Vincent and the Grenadines, 100 % of the schools (n = 86) agreed to participate in the study. About 78 % of schools in Barbados (18 out of 23) and 93.3 % in Dominica (14 out of 15) agreed to participate in the study.

In Guyana and Trinidad and Tobago, a total of 115 and 135 public schools, respectively, enrolled Form 5 students and were eligible for inclusion in the study. Given the large number of schools in these two nations, we randomly selected schools for participation. Our school-level sample size for each nation was calculated with a margin of error of 5 % at a level of 95 % confidence. Based on these calculations, it was determined that a sample of 89 schools in Guyana and 99 schools in Trinidad and Tobago were required to participate in the study. In Guyana, of the 89 schools approached for participation, all agreed to participate in the study. In Trinidad and Tobago, 128 schools were approached to obtain a sample of 99 schools. These procedures resulted in a school-level response rate of 100 % for Guyana and 74.4 % for Trinidad and Tobago. As shown in Table 1, in total, across the region, our school-level response rates were high. Of the 341 schools approached, 306 agreed to participate for a school-level response rate of 89.8 %.

All students present in their homerooms on the scheduled day were given the survey instrument. They were informed that if they did not want to participate, they did not have to fill out any questions and could return an incomplete survey. Likewise, they were informed that if they did not want to answer a specific question, they did not have to provide an answer to that question. These and the above methods were approved by the primary author's university Human Subjects Review Board (#1301008686). As seen in Table 1, of the 27,063 enrolled students, 18,312 completed a survey for a response rate of about 68 %. At the national level, response rates ranged from about 63 to 87 %; this is comparable to student response rates for prior studies using passive consent procedures in the United States (Esbensen et al., 2001).

Our study has the typical limitations associated with school-based survey research. Our sample was limited to public school-attending youth in each nation and did not include those who were sick, dropped out, or were in a detention facility or hospital. Therefore, those at the highest risk for delinquency were potentially under-represented in our sample. In addition, our sample did not include private school students who are at low risk for delinquency. Despite this limitation, our sample is robust in that it includes a large proportion of all 5th Form public school students in each nation. Optimally, valid and reliable data on the gender and ethnicity of each nation's Form 5 students would be available to assess the representativeness of our data; however, that was not the case for most of the study nations. We suspect this is why past studies of the region have not included this information (see, for example, Blum et al., 2003; Halcon et al., 2003). In fact, most nations did not possess an accurate census of the number of Form 5 students at the school or national level. In Antigua and Barbuda and St. Kitts and Nevis, the two nations with valid and reliable administrative data on the gender of their students, our samples were found to be representative. Regardless, our study is limited by our inability to assess the representativeness of our sample. Therefore, generalizing our results to the broader school-based population should be done with caution.

2.3. Measures

We employed a survey instrument developed by the Eurogang Working Group (EWG) for the present study. The working group created this survey to collect data on the scope and nature of Troublesome Youth Group (TYG) problems from school-aged youth. Its measures have been used in many different nations, which provides an opportunity to contextualize our results from the English-speaking Caribbean to those obtained from other regions and countries (Esbensen & Maxson, 2012). The instrument contains several items measuring respondents' individual and family characteristics, school involvement, and self-reported delinquency. Before administration, key stakeholders employed by the Ministries of Education reviewed the instrument. They provided feedback on survey questions and response options to better reflect national language and culture (i.e., ethnic composition, monetary units, social activities, and organizations). The instrument was pilot tested in Barbados and was administered to school youth in the remaining nations from 2014 through 2015.

Measures used in the present study include self-reported delinquency and self-reported demographic characteristics. First, self-reported delinquency was measured through 12 items asking about the respondents' past year's involvement in violence, property offenses, alcohol use, marijuana use, drug sales, and gang involvement. Measures of past year prevalence (past 12 months) were attained from each respondent for each item. Response options for each of the measures below included: Never, Once or Twice, 3–5 times, 6–10 times, and More than ten times. For each offense, we dichotomized responses for our measure of last year's prevalence. Responses that indicated never engaging in the offense or activity in the past 12 months were coded as 0. Responses that indicated engaging in the offense or activity-one or more times in the past 12 months were coded as 1.

The violent offense measures relied on four individual items that asked, "During the past 12 months, how often have you: (a) Hit someone with the idea of hurting them, (b) Carried a hidden weapon (of any kind) for protection, (c) Attacked someone with a weapon (of any kind), and (d) involved in fights with other groups."

The property offense measures included six items that asked, "During the past 12 months, how often have you: (a) Avoided paying for something such as movies, or the bus, (b) Purposely damaged or destroyed property that did not belong to you, (c) Illegally spray painted a wall or building, (d) Stolen or tried to steal something worth LESS than EC$100, (e) Stolen or tried to steal something worth MORE than EC$100, and (f) Gone into or tried to go into a building to steal something."

The instrument also contained two items measuring substance use and one item measuring drug sales. These items asked, "During the past 12 months, how often have you: (a) Used alcohol, (b) Used marijuana,

and (c) Sold illegal drugs." Respondents were also asked about their involvement in gangs. Specifically, they were asked, "Are you currently a member of a gang." Youth who responded "yes" were coded as gang involved.

For the purpose of this study if a respondent answered affirmatively to any of the above delinquency items, not including gang involvement, the respondent was coded as having been involved in general delinquency over the past 12 months. This variable serves as our measure of involvement in any delinquency over the prior 12 months.

Second, self-reported gender, ethnicity, and age were collected through the survey instrument from each respondent. Gender response options included male and female. Ethnicity is also a self-reported measure. Respondents could identify themselves as belonging to one of four groups: Afro-Caribbean, East Indian, Other ethnic group (i.e., white, European, Asian, Chinese, and Ameri-Indian), and Mixed ethnic group. Each respondent was asked to provide their age at the time of the survey.

2.4. Analysis

In this study, prevalence rates of delinquency and gang involvement with 95 % confidence intervals were reported using self-reported survey data. Specifically, first, we examined the differences between nations in the prevalence of delinquency and gang involvement. Second, we presented our analysis related to within and between nation differences in the prevalence of delinquency and gang involvement by gender. Last, we assessed the within and between nation prevalence of delinquency and gang involvement by ethnicity. The analyses for the present study were conducted in STATA 15 using a series of chi-square tests due to the categorical nature of the variables (StataCorp, 2017).

3. Results

Table 2 presents the demographic characteristics of our sample by nation. It shows that females comprised more than half our sample in each nation ranging from about 53 % female in St. Kitts and Nevis to about 62 % in Guyana. Less than one percent of respondents did not report their gender across nations. The ethnic composition of each nation's sample is represented by Afro-Caribbeans (ranging from 31.9 % in Trinidad and Tobago to 79.2 % in St. Kitts and Nevis), East Indians (ranging from 1.4 % in St. Vincent and the Grenadines to 37 % in Trinidad and Tobago), Other (3.3 % in St. Lucia to 24.6 % in Guyana), and Mixed (ranging from 4.5 % in St. Kitts and Nevis to 33 % in St. Vincent and the Grenadines). Less than 5 % of respondents in each nation did not report their ethnicity, varying from 0.2 % in Guyana to 4.2 % in St. Vincent and the Grenadines. It is important to note that data on the respondent's ethnicity was not collected in Barbados at the request of local officials. The mean self-reported age of the respondents ranged from 15.7 years old in Barbados to 16.5 years old in Dominica and St. Vincent and the Grenadines.

Table 3 presents the results of our analysis for last year's prevalence of self-reported delinquency by nation. A very high proportion of youth self-reported involvement in at least one delinquent offense over the past 12 months in all of the study nations; however, there were significant differences between nations. Specifically, youth in St. Lucia were significantly more likely to self-report any involvement in delinquency (95 %) than youth in Antigua and Barbuda (90 %), Grenada (92 %), St. Kitts and Nevis (92 %), St. Vincent and the Grenadines (90 %), Trinidad and Tobago (85 %), and Guyana (83 %). Likewise, Barbadian youth (94 %) reported significantly higher rates of engaging in any delinquent act when compared to youth in Antigua and Barbuda (90 %) and St. Vincent and the Grenadines (90 %), of which each reported significantly high rates than youth in Trinidad and Tobago (85 %), and Guyana (83 %). In addition, youth in Dominica (93 %) reported significantly higher rates of any involvement in delinquency than youth in Trinidad and Tobago (85 %), who reported significantly more delinquency than youth in Guyana (83 %).

In most nations, violence and alcohol use were the most common forms of self-reported delinquency. First, our findings show significant differences between nations regarding respondent's involvement in violence over the past 12 months. Youth in Barbados were more likely to self-report involvement in violence (81 %), followed by Dominica (80 %), St. Kitts and Nevis (79 %), St. Lucia (77 %), St. Vincent and the Grenadines (75 %), Grenada (71 %), Antigua and Barbuda (70 %), Guyana (67 %), and Trinidad and Tobago (67 %). Second, youth in St. Lucia (84 %) were significantly more likely to self-report having used alcohol in the past year when compared to youth in Barbados (80 %), Dominica (80 %), and Grenada (79 %), who were in turn significantly more likely to self-report having used alcohol in the past year than youth in Antigua and Barbuda (74 %), St. Kitts and Nevis (72 %), and St. Vincent and the Grenadines (72 %). Youth in Trinidad and Tobago (67 %) and Guyana (57 %) were the least likely to report having used alcohol in the past year.

Property crime was the next most frequent form of self-reported delinquency. Youth in Grenada (69 %) were the most likely to report property crime in the past year, followed by youth in St. Kitts and Nevis (68 %), St. Lucia (68 %), Dominica (66 %), Barbados (63 %), St. Vincent and the Grenadines (60 %), Antigua and Barbuda (57 %), Guyana (53 %), and Trinidad and Tobago (48 %). Self-reported marijuana use was also significantly different between nations. Youth in St. Lucia (37 %), St. Kitts and Nevis (36 %), Dominica (35 %), and Antigua and Barbuda (35 %) were significantly more likely to self-report marijuana use in the past year compared to youth in other nations. Youth in Barbados (29 %) and St. Vincent and the Grenadines (27 %) were significantly more likely

Table 2
Respondents' demographic characteristics (n = 17,605).

	Antigua & Barbuda (n = 738) %	Barbados (n = 2,232) %	Dominica (n = 767) %	Grenada (n = 1,067) %	Guyana (n = 3,701) %	St. Kitts & Nevis (n = 466) %	St. Lucia (n = 1,932) %	St. Vincent & the Grenadines (n = 1,101) %	Trinidad & Tobago (n = 5,601) %
Sex									
Female	55.3	56.6	56.5	54.2	61.8	52.8	57.9	58.9	56.3
Male	43.9	42.7	43.2	45.7	38.0	46.6	41.8	41.0	43.4
Unknown	0.8	0.7	0.3	0.1	0.2	0.6	0.3	0.1	0.3
Ethnicity									
Afro-Caribbean	72.2	–	56.2	75.0	34.4	79.2	59.9	53.2	31.9
East Indian	1.6	–	8.9	6.7	32.5	2.4	3.4	1.4	37.0
Other	7.0	–	4.4	9.1	24.6	11.6	3.3	8.3	18.4
Mixed	15.4	–	27.4	5.4	8.3	4.5	31.8	33.0	11.5
Unknown	3.7	100.0	3.1	3.8	0.2	2.4	1.6	4.2	1.3
Age (mean, sd)	16.4(1.0)	15.7(0.7)	16.5(0.8)	16.1(0.9)	16.1(0.6)	16.2(0.7)	16.3(0.6)	16.5(0.9)	16.2(0.8)

Table 3
Prevalence of self-reported past 12-month delinquency and gang involvement by nation (95% CI).

	1. Antigua & Barbuda (n = 738)	2. Barbados (n = 2,232)	3. Dominica (n = 767)	4. Grenada (n = 1,067)	5. Guyana (n = 3,701)	6. St. Kitts & Nevis (n = 466)	7. St. Lucia (n = 1,932)	8. St. Vincent & the Grenadines (n = 1,101)	9. Trinidad & Tobago (n = 5,601)	Sig.
General delinquency	0.90 (0.88–0.92)	0.94 (0.93–0.95)	0.93 (0.91–0.94)	0.92 (0.91–0.94)	0.83 (0.82–0.84)	0.92 (0.89–0.94)	0.95 (0.93–0.95)	0.90 (0.88–0.92)	0.85 (0.84–0.86)	7 > 1,4,6,8 > 9 > 5; 2 > 1,8 > 9 > 5; 3 > 9 > 5
Violence	0.70 (0.66–0.73)	0.81 (0.79–0.83)	0.80 (0.76–0.82)	0.71 (0.68–0.74)	0.67 (0.65–0.68)	0.79 (0.75–0.82)	0.77 (0.75–0.78)	0.75 (0.72–0.77)	0.67 (0.66–0.68)	2 > 7,8 > 1,5; 2,3 > 4 > 5,9; 3,6 > 1,4; 3 > 8; 6,7,8 > 5,9; 7 > 4 > 9
Property offense	0.57 (0.54–0.61)	0.63 (0.61–0.65)	0.66 (0.63–0.70)	0.69 (0.66–0.71)	0.53 (0.51–0.54)	0.68 (0.63–0.72)	0.68 (0.66–0.70)	0.60 (0.58–0.63)	0.48 (0.46–0.49)	4,7 > 2 > 1 > 5 > 9; 4,6,7 > 8; 6,3,2 > 1 > 9; 6,8 > 5 > 9; 3 > 5,8
Alcohol use	0.74 (0.71–0.77)	0.80 (0.78–0.81)	0.80 (0.77–0.83)	0.79 (0.76–0.81)	0.57 (0.56–0.59)	0.72 (0.67–0.76)	0.84 (0.82–0.86)	0.72 (0.69–0.74)	0.67 (0.66–0.68)	7 > 2,3,4 > 1,6,8 > 9 > 5
Marijuana use	0.35 (0.32–0.39)	0.29 (0.27–0.31)	0.35 (0.32–0.39)	0.22 (0.19–0.24)	0.16 (0.15–0.17)	0.36 (0.32–0.41)	0.37 (0.35–0.39)	0.27 (0.25–0.30)	0.22 (0.21–0.23)	1,3,6,7 > 2,8 > 4,9 > 5
Drug sales	0.09 (0.07–0.11)	0.09 (0.08–0.10)	0.19 (0.16–0.22)	0.07 (0.05–0.08)	0.08 (0.07–0.09)	0.10 (0.07–0.13)	0.12 (0.11–0.14)	0.11 (0.09–0.13)	0.08 (0.08–0.09)	3 > 7 > 1,2,4,5,9; 3 > 2,6,8 > 4; 8 > 5,9
Gang involvement	0.06 (0.04–0.08)	0.15 (0.13–0.17)	0.20 (0.17–0.23)	0.09 (0.07–0.11)	0.18 (0.16–0.19)	0.07 (0.05–0.10)	0.18 (0.16–0.20)	0.14 (0.12–0.16)	0.08 (0.08–0.09)	3,5,7 > 2,8 > 1,4,6,9

Note. Prevalence was compared by gender and by country using chi-square test. Only significant relationships ($p < .05$) are presented.

to self-report marijuana use in the past 12 months compared to youth in Grenada (22 %) and Trinidad and Tobago (22 %), who were significantly more likely to self-report marijuana use in the past 12 months than youth in Guyana (16 %). A substantial proportion (19 %) of youth in Dominica self-reported selling drugs in the past year. About 10 to 12 % of youth in St. Lucia, St. Vincent and the Grenadines, and St. Kitts reported selling drugs in the past year, and 7 to 9 % of the youth in the remaining countries self-reported selling drugs.

In addition, we found significant and substantial differences between nations in the proportion of youth who self-reported gang involvement. Youth in Dominica (20 %), Guyana (18 %), and St. Lucia (18 %) reported significantly more gang involvement than youth in Barbados (15 %) and St. Vincent and the Grenadines (14 %), who reported significantly greater gang involvement than youth in Grenada (9 %), Trinidad and Tobago (8 %), St. Kitts and Nevis (7 %), and Antigua and Barbuda (6 %).

Table 4 shows our results related to past year prevalence in delinquency by gender. With only a few exceptions, males, when compared to females in the same nation, were significantly more likely to self-report past 12-month involvement in any delinquency, violence, property crime, alcohol use, marijuana use, drug sales, and gangs. However, our analysis showed that in some study nations, females self-reported greater involvement in some offense types than males in other countries. For example, 77 % of females in Barbados reported involvement in violence in the past year compared to 74 % of males in Guyana. Likewise, 81 % of females in St. Lucia reported using alcohol in the past year compared to 77 % of males in Antigua and Barbuda and St. Kitts and Nevis, 64 % in Guyana, 78 % in St. Vincent and the Grenadines, and 70 % in Trinidad and Tobago.

Males and females in Barbados (86 % and 77 %, respectively), St. Kitts and Nevis (82 % and 76 %, respectively), and Dominica (89 % and 73 %) were the most likely to report engaging in violence in the past year when compared to youth in the other study nations. Similar patterns were observed for property crime, marijuana use, and gang involvement. While females in Grenada were significantly more likely than females in other nations to self-report committing a property offense in the past 12 months, males in Grenada, Dominica, St. Kitts and Nevis, and St. Lucia were significantly more likely than males in each of the other nations to self-report committing a property offense in the past 12-month. Females in Barbados and St. Lucia were significantly more likely to self-report having used alcohol in the past 12 months compared to females in other nations, and females in Antigua and Barbuda, Barbados, Dominica, St. Kitts and Nevis, and St. Lucia were more likely to have used marijuana at least once in the past 12 months compared to females in the other nations. Males in Dominica and St. Lucia reported the highest rates of alcohol use, and males in Antigua and Barbuda, Dominica, St. Kitts and Nevis, and St. Lucia reported the highest rates of marijuana use among youth in the study nations. Males and females in Dominica reported significantly higher rates of drug sales (34 % and 7 %, respectively) and gang involvement (28 % and 14 %, respectively) than males and females in most other nations. Females in St. Vincent and the Grenadines (7 %) and males in St. Lucia (22 %) also reported high rates of drug sales. Females in Barbados (13 %) and females and males in Guyana (13 % and 24 %, respectively), and St. Lucia (13 % and 26 %, respectively) reported some of the highest rates of gang involvement among youth in the region.

Table 5 presents the results of our analysis on the prevalence of delinquency by ethnicity within and between nations. When we examined within-nation differences, ethnicity was not significantly associated with self-reporting any delinquent behavior in Antigua and Barbuda, Dominica, Grenada, St. Lucia, and St. Vincent and the Grenadines. In Guyana and Trinidad and Tobago, Afro-Caribbean, Mixed, and youth from "other" ethnic backgrounds were significantly more likely to self-report any delinquency in the past 12 months than East Indian youth. In St. Kitts and Nevis, Afro-Caribbean and youth from "other" ethnic backgrounds were significantly more likely to self-report committing any delinquency in the past 12 months than youth with a "mixed" ethnic

Table 4
Prevalence of self-reported past 12-month delinquency and gang involvement by gender across nations (95% CI).

	Sex	1. Antigua & Barbuda (n = 738)	2. Barbados (n = 2,232)	3. Dominica (n = 767)	4. Grenada (n = 1,067)	5. Guyana (n = 3,701)	6. St. Kitts & Nevis (n = 466)	7. St. Lucia (n = 1,932)	8. St. Vincent & the Grenadines (n = 1,101)	9. Trinidad & Tobago (n = 5,601)	Significance between countries
General delinquency	F	0.87 (0.84–0.90)	0.92 (0.90–0.93)	0.89 (0.86–0.92)	0.91 (0.88–0.93)	0.81 (0.79–0.82)	0.90 (0.85–0.93)	0.92 (0.90–0.94)	0.88 (0.86–0.91)	0.82 (0.80–0.83)	2,7 > 1,8 > 5,9; 3,4,6 > 5,9
	M	0.94 (0.90–0.96)	0.96 (0.94–0.97)	0.98 (0.95–0.99)	0.94 (0.92–0.96)	0.87 (0.86–0.89)	0.94 (0.90–0.97)	0.98 (0.96–0.99)	0.93 (0.90–0.95)	0.90 (0.89–0.91)	3,7 > 1,4,8 > 9 > 5; 3,7 > 6 > 5; 7 > 2 > 8
	Sig.	M > F	M > F	M > F	M > F	M > F	–	M > F	M > F	M > F	
Violence	F	0.62 (0.58–0.67)	0.77 (0.75–0.80)	0.73 (0.68–0.77)	0.65 (0.61–0.69)	0.62 (0.60–0.64)	0.76 (0.70–0.81)	0.70 (0.67–0.72)	0.70 (0.67–0.74)	0.60 (0.58–0.61)	2,3,6 > 1,4,5,9; 6 > 7 2 > 7,8 > 1,5,9; 4 > 9
	M	0.78 (0.73–0.83)	0.86 (0.83–0.88)	0.89 (0.85–0.92)	0.78 (0.74–0.81)	0.74 (0.72–0.77)	0.82 (0.76–0.87)	0.86 (0.84–0.89)	0.81 (0.77–0.84)	0.77 (0.75–0.78)	2,3,7 > 1,4,5,8,9; 3 > 6; 6,8 > 5
	Sig.	M > F	M > F	M > F	M > F	M > F	–	M > F	M > F	M > F	
Property offense	F	0.49 (0.44–0.54)	0.55 (0.52–0.58)	0.55 (0.50–0.59)	0.61 (0.57–0.65)	0.47 (0.45–0.49)	0.57 (0.51–0.64)	0.58 (0.55–0.61)	0.54 (0.50–0.58)	0.40 (0.38–0.41)	4 > 1,2,5,8,9; 2,6,7 > 1,5 > 9; 3,8 > 5 > 9
	M	0.68 (0.63–0.73)	0.73 (0.70–0.76)	0.82 (0.77–0.86)	0.78 (0.74–0.82)	0.62 (0.59–0.64)	0.80 (0.74–0.85)	0.81 (0.79–0.84)	0.70 (0.66–0.75)	0.58 (0.56–0.60)	3,4,6,7 > 1,2,8 > 5 > 9
	Sig.	M > F	M > F	M > F	M > F	M > F	M > F	M > F	M > F	M > F	
Alcohol use	F	0.72 (0.67–0.76)	0.78 (0.76–0.80)	0.77 (0.72–0.81)	0.76 (0.72–0.79)	0.53 (0.51–0.55)	0.67 (0.61–0.73)	0.81 (0.78–0.83)	0.67 (0.64–0.71)	0.65 (0.64–0.67)	2,7 > 1,5,6,8,9; 7 > 4; 3,4 > 6,8,9 > 5; 1 > 9
	M	0.77 (0.72–0.81)	0.82 (0.79–0.84)	0.84 (0.80–0.88)	0.82 (0.79–0.86)	0.64 (0.61–0.66)	0.77 (0.71–0.83)	0.88 (0.86–0.90)	0.78 (0.74–0.82)	0.70 (0.68–0.71)	3,7 > 1,6,8 > 9 > 5; 7 > 2,4 > 9; 4 > 1
	Sig.	–	M > F	M > F	M > F	M > F	M > F	M > F	M > F	M > F	
Marijuana use	F	0.27 (0.23–0.32)	0.23 (0.20–0.25)	0.27 (0.22–0.31)	0.17 (0.14–0.20)	0.10 (0.09–0.12)	0.27 (0.21–0.33)	0.29 (0.27–0.32)	0.21 (0.18–0.24)	0.16 (0.14–0.17)	1,2,3,6,7 > 4,5,9; 7 > 2 1,3,7 > 8 > 9 > 5; 4 > 5
	M	0.45 (0.39–0.50)	0.37 (0.34–0.41)	0.47 (0.42–0.53)	0.27 (0.23–0.31)	0.25 (0.23–0.28)	0.46 (0.39–0.53)	0.47 (0.44–0.51)	0.37 (0.32–0.42)	0.31 (0.29–0.32)	1,3,6,7 > 2,8 > 4,9 > 5
	Sig.	M > F	M > F	M > F	M > F	M > F	M > F	M > F	M > F	M > F	
Drug sales	F	0.04 (0.02–0.06)	0.04 (0.03–0.05)	0.07 (0.05–0.10)	0.03 (0.02–0.05)	0.05 (0.04–0.06)	0.03 (0.01–0.06)	0.05 (0.04–0.07)	0.07 (0.05–0.09)	0.04 (0.03–0.04)	3,8 > 1,2,4,5,6,9; 5,7 > 9; 7 > 4
	M	0.16 (0.12–0.20)	0.15 (0.13–0.18)	0.34 (0.29–0.40)	0.11 (0.08–0.14)	0.13 (0.11–0.15)	0.17 (0.12–0.23)	0.22 (0.19–0.25)	0.17 (0.13–0.20)	0.14 (0.13–0.16)	3,7 > 1,2,4,5,8,9; 3 > 6,7; 1,2,6,8 > 4
	Sig.	M > F	M > F	M > F	M > F	M > F	M > F	M > F	M > F	M > F	
Gang involvement	F	0.05 (0.03–0.07)	0.13 (0.11–0.15)	0.14 (0.11–0.18)	0.06 (0.04–0.09)	0.13 (0.12–0.15)	0.05 (0.02–0.08)	0.13 (0.11–0.15)	0.11 (0.09–0.14)	0.06 (0.05–0.06)	2,3,5,7,8 > 1,4,6,9
	M	0.08 (0.05–0.12)	0.18 (0.15–0.21)	0.28 (0.22–0.33)	0.12 (0.09–0.15)	0.24 (0.22–0.27)	0.11 (0.07–0.16)	0.26 (0.22–0.29)	0.17 (0.14–0.21)	0.12 (0.11–0.14)	3,5,7 > 2,8 > 1,4,6,9
	Sig.	–	M > F	M > F	M > F	M > F	M > F	M > F	M > F	M > F	

Note. Prevalence was compared by gender and by country using chi-square test. Only significant relationships ($p < .05$) are presented.

Table 5
Prevalence of self-reported past 12-month delinquency and gang involvement by ethnicity across nations (95% CI).

Problem behavior	Ethnicity	1. Antigua & Barbuda (n = 738)	3. Dominica (n = 767)	4. Grenada (n = 1,067)	5. Guyana (n = 3,701)	6. St. Kitts & Nevis (n = 466)	7. St. Lucia (n = 1,932)	8. St. Vincent & the Grenadines (n = 1,101)	9. Trinidad & Tobago (n = 5,601)	Significance between countries
General delinquency	a. Afro-Caribbean	0.90 (0.87–0.93)	0.93 (0.91–0.96)	0.93 (0.91–0.94)	0.87 (0.85–0.89)	0.93 (0.90–0.96)	0.95 (0.93–0.96)	0.91 (0.88–0.93)	0.89 (0.87–0.90)	7 > 1,8,9 > 5; 3,4,6 > 9 > 5
	b. East Indian	N/A	0.88 (0.78–0.95)	N/A	0.76 (0.73–0.78)	N/A	N/A	N/A	0.79 (0.77–0.81)	3,9 > 5
	c. Others	0.85 (0.72–0.93)	N/A	0.89 (0.81–0.94)	0.88 (0.85–0.90)	0.91 (0.80–0.97)	N/A	0.89 (0.81–0.95)	0.89 (0.87–0.91)	–
	d. Mixed	0.90 (0.83–0.95)	0.92 (0.88–0.96)	0.90 (0.79–0.96)	0.85 (0.81–0.89)	0.71 (0.48–0.89)	0.94 (0.92–0.96)	0.91 (0.87–0.94)	0.87 (0.84–0.89)	3,7,8 > 5,6,9; 1,4,9 > 6
	Sig.	–	–	–	a,c,d > b	a,c > d	–	–	a,c,d > b	
Violence	a. Afro-Caribbean	0.69 (0.65–0.73)	0.79 (0.75–0.83)	0.72 (0.69–0.75)	0.72 (0.69–0.74)	0.81 (0.77–0.85)	0.76 (0.74–0.79)	0.75 (0.71–0.78)	0.73 (0.71–0.75)	3,6,7 > 1,4,5,9; 6 > 8 > 1
	b. East Indian	0.75 (0.43–0.95)	0.78 (0.66–0.87)	0.67 (0.55–0.78)	0.60 (0.57–0.63)	0.45 (0.17–0.77)	0.75 (0.63–0.85)	0.64 (0.35–0.87)	0.59 (0.57–0.62)	3,7 > 5,6,9
	c. Others	0.68 (0.53–0.80)	0.85 (0.68–0.95)	0.72 (0.62–0.81)	0.70 (0.67–0.73)	0.70 (0.56–0.82)	0.77 (0.65–0.87)	0.77 (0.67–0.85)	0.71 (0.68–0.74)	–
	d. Mixed	0.70 (0.61–0.78)	0.80 (0.74–0.86)	0.58 (0.44–0.71)	0.65 (0.59–0.70)	0.71 (0.48–0.89)	0.77 (0.73–0.80)	0.74 (0.69–0.78)	0.68 (0.64–0.71)	3 > 1; 3,7,8 > 4,5,9
	Sig.	–	–	a > d	a > b,d; b > c	a > b	–	–	a > d > b; c > b	
Property offense	a. Afro-Caribbean	0.58 (0.53–0.62)	0.69 (0.64–0.73)	0.70 (0.67–0.74)	0.60 (0.57–0.63)	0.70 (0.65–0.75)	0.68 (0.65–0.71)	0.62 (0.58–0.66)	0.55 (0.53–0.58)	3,4,6,7 > 1; 3,4,6,7 > 5,8 > 9;
	b. East Indian	0.58 (0.28–0.85)	0.69 (0.57–0.80)	0.65 (0.52–0.76)	0.42 (0.39–0.45)	0.45 (0.17–0.77)	0.71 (0.58–0.81)	0.50 (0.23–0.77)	0.40 (0.38–0.43)	3,4,7 > 5,9
	c. Others	0.55 (0.40–0.69)	0.88 (0.71–0.96)	0.62 (0.51–0.72)	0.56 (0.53–0.59)	0.69 (0.54–0.80)	0.65 (0.51–0.76)	0.59 (0.48–0.69)	0.51 (0.48–0.54)	3 > 4,5,6,7 > 9; 3 > 1,8
	d. Mixed	0.52 (0.43–0.62)	0.58 (0.50–0.64)	0.60 (0.47–0.73)	0.55 (0.49–0.61)	0.30 (0.12–0.54)	0.67 (0.63–0.71)	0.58 (0.53–0.63)	0.44 (0.40–0.48)	7 > 3,5,8 > 6,9; 7 > 1;4 > 6,9
	Sig.	–	c > a > d; c > b	–	a,c,d > b	a,c > d	–	–	a > c > b,d	
Alcohol use	a. Afro-Caribbean	0.74 (0.70–0.78)	0.79 (0.75–0.83)	0.79 (0.76–0.82)	0.63 (0.60–0.66)	0.74 (0.69–0.78)	0.83 (0.81–0.85)	0.70 (0.66–0.74)	0.72 (0.70–0.74)	7 > 4 > 1,6,8,9 > 5; 3 > 1,8,9 > 5
	b. East Indian	0.50 (0.21–0.79)	0.82 (0.71–0.90)	0.85 (0.74–0.92)	0.50 (0.47–0.53)	0.45 (0.17–0.77)	0.85 (0.74–0.92)	0.73 (0.45–0.92)	0.59 (0.57–0.61)	3,4,7 > 1,5,6,9; 9 > 5
	c. Others	0.71 (0.57–0.83)	0.85 (0.68–0.95)	0.73 (0.63–0.82)	0.62 (0.57–0.68)	0.72 (0.58–0.84)	0.85 (0.74–0.93)	0.63 (0.52–0.73)	0.72 (0.69–0.75)	7 > 9; 3,7 > 5,8; 1,4,6,9 > 5
	d. Mixed	0.79 (0.70–0.86)	0.79 (0.72–0.84)	0.74 (0.61–0.85)	0.62 (0.57–0.68)	0.55 (0.32–0.77)	0.85 (0.82–0.88)	0.76 (0.71–0.80)	0.71 (0.67–0.74)	7 > 3,4,5,6,8,9; 1,3,8 > 5,6; 3 > 9 > 5
	Sig.	d > b	–	–	a > c > b; d > b	a > b	–	d > c	a,c,d > b	
Marijuana use	a. Afro-Caribbean	0.36 (0.32–0.40)	0.34 (0.30–0.39)	0.22 (0.19–0.25)	0.20 (0.18–0.23)	0.38 (0.33–0.43)	0.35 (0.33–0.38)	0.25 (0.21–0.29)	0.24 (0.22–0.26)	1,3,6,7 > 4,5,8,9; 8,9 > 5
	b. East Indian	N/A	0.43 (0.31–0.56)	0.23 (0.14–0.34)	0.11 (0.09–0.13)	N/A	0.42 (0.30–0.55)	0.43 (0.18–0.71)	0.18 (0.16–0.19)	3 > 4,5,9; 7,8 > 9 > 5; 7 > 4 > 5
	c. Others	0.39 (0.26–0.54)	0.52 (0.34–0.69)	0.22 (0.14–0.31)	0.16 (0.13–0.18)	0.37 (0.24–0.51)	0.40 (0.28–0.53)	0.29 (0.20–0.40)	0.28 (0.25–0.31)	3,7,1,6 > 4,5; 3 > 8,9 > 5; 7 > 9
	d. Mixed	0.34 (0.25–0.43)	0.34 (0.28–0.41)	0.14 (0.06–0.25)	0.19 (0.15–0.24)	N/A	0.39 (0.35–0.43)	0.29 (0.25–0.34)	0.22 (0.19–0.26)	1,3,7,8 > 4,5,9; 7 > 8
	Sig.	–	c > a	–	a > c > b; d > b	–	–	–	c > a,d > b	
Drug sales	a. Afro-Caribbean	0.09 (0.06–0.12)	0.19 (0.16–0.23)	0.07 (0.05–0.09)	0.10 (0.08–0.11)	0.10 (0.07–0.13)	0.12 (0.10–0.14)	0.09 (0.07–0.11)	0.09 (0.07–0.10)	3 > 1,4,5,6,7,8,9; 5,6 > 4; 7 > 9
	b. East Indian	N/A	0.24 (0.14–0.36)	N/A	0.06 (0.04–0.07)	N/A	0.23 (0.14–0.36)	N/A	0.07 (0.06–0.09)	3,7 > 5,9
	c. Others	0.13 (0.06–0.26)	0.28 (0.14–0.47)	0.06 (0.02–0.13)	0.09 (0.07–0.11)	0.11 (0.04–0.23)	0.15 (0.07–0.26)	0.09 (0.04–0.17)	0.11 (0.09–0.13)	3 > 4,5,6,8,9
	d. Mixed			N/A		N/A				3 > 5,7,9; 7,8 > 9

(*continued on next page*)

Table 5 (*continued*)

Problem behavior	Ethnicity	1. Antigua & Barbuda (n = 738)	3. Dominica (n = 767)	4. Grenada (n = 1,067)	5. Guyana (n = 3,701)	6. St. Kitts & Nevis (n = 466)	7. St. Lucia (n = 1,932)	8. St. Vincent & the Grenadines (n = 1,101)	9. Trinidad & Tobago (n = 5,601)	Significance between countries
		0.10 (0.05–0.17)	0.17 (0.12–0.23)		0.09 (0.06–0.13)		0.11 (0.09–0.14)	0.12 (0.09–0.16)	0.06 (0.05–0.08)	
	Sig.	–	–	N/A	a,c,d > b	N/A	b > a,d	–	c > b,d	
Gang involvement	a. Afro-Caribbean	0.07 (0.05–0.10)	0.22 (0.18–0.27)	0.09 (0.07–0.11)	0.19 (0.17–0.21)	0.07 (0.05–0.11)	0.18 (0.15–0.20)	0.12 (0.10–0.16)	0.06 (0.05–0.08)	3,5,7 > 8 > 1,4,6; 3,4,5,7,8 > 9
	b. East Indian	N/A	0.18 (0.09–0.30)	N/A	0.19 (0.17–0.22)	N/A	0.26 (0.16–0.39)	N/A	0.09 (0.08–0.11)	3,5,7 > 9
	c. Others	N/A	0.22 (0.09–0.42)	0.13 (0.07–0.21)	0.15 (0.12–0.17)	0.11 (0.04–0.24)	0.27 (0.16–0.40)	0.17 (0.09–0.26)	0.12 (0.10–0.14)	7 > 4,5,6,9
	d. Mixed	N/A	0.17 (0.12–0.24)	N/A	0.14 (0.10–0.19)	N/A	0.16 (0.13–0.20)	0.15 (0.11–0.19)	0.06 (0.04–0.08)	3,5,7,8 > 9
	Sig.	N/A	–	–	a,b > c,d	N/A	c > d	–	b,c > a,d	

Note. Prevalence was compared by ethnicity and by country using chi-square test. Only significant relationships ($p < .05$) are presented.
N/A: observations with under 5. Chi-square test was not conducted if the cell is smaller than 5.
Barbados is omitted in this table because ethnicity was not collected in Barbados.

background.

When we examined the association between ethnicity and delinquency by offense type within nations, we found that Afro-Caribbeans often reported some of the highest prevalence rates, especially for more serious types of delinquency such as violence and property crime. For example, Afro-Caribbeans were significantly more likely to report that they had engaged in violence in the past 12 months in Grenada, Guyana, St. Kitts and Nevis, and Trinidad and Tobago and were the most likely to have engaged in a property offense in the past 12 months in Guyana, St. Kitts and Nevis, and Trinidad and Tobago. East Indian youth self-reported some of the lowest rates of violence and property crime for both these offense types.

Youth from a mixed ethnic background in Antigua and Barbuda, Guyana, St. Vincent and the Grenadines, Trinidad and Tobago, and those from an Afro-Caribbean background in Guyana, St. Kitts and Nevis, and Trinidad and Tobago reported significantly higher rates of alcohol use than some other ethnic groups in each of their respective nations. In Dominica and Trinidad and Tobago, youth from an "other" ethnic background were significantly more likely to self-report marijuana use. In Guyana, Afro-Caribbean and Mixed youth were significantly more likely to self-report marijuana use than some other ethnic groups.

With regard to 12-month self-reported drug sales, in Guyana, Afro-Caribbean, "other" and mixed youth were significantly more likely to report selling drugs. In St. Lucia, East Indian youth were significantly more likely to report selling drugs, and in Trinidad and Tobago youth from an "other" ethnic group were the most likely to report selling drugs. Gang membership was highest among Afro-Caribbeans and East Indians in Guyana, "other" ethnic groups in St. Lucia, and East Indians and youth from "other" ethnic groups in Trinidad and Tobago.

We also examined between nation differences for the relationship between ethnicity and offending. The analysis identified several trends that showed that youth in some nations, regardless of ethnicity and offense type, self-reported delinquency more than youth in other nations. For example, youth in Dominica and St. Lucia, regardless of ethnicity, self-reported significantly higher rates of past 12-month offending than youth in other nations. This was true for general delinquency, violence, property crime, alcohol and marijuana use, drug sales, and gang involvement. In general, none of the ethnic groups in Trinidad and Tobago and Guyana reported significantly higher offending rates than the same ethnic groups in other nations, except for Afro-Caribbean, East Indian, and mixed-race youth in Guyana, who reported high rates of gang involvement compared to other nations.

Mixed-race youth in Antigua and Barbuda reported significantly greater involvement in general delinquency, alcohol use, and marijuana use than mixed-race youth in many other nations. In St. Kitts and Nevis Afro-Caribbeans self-reported significantly higher rates of general delinquency, violence, property crime, and alcohol use than Afro-Caribbeans in other nations for those same offense types. While results for Grenada were similar to those of St. Kitts and Nevis (except for the relationship between Afro-Caribbeans and alcohol use), East Indian youth in Grenada reported especially high rates of property crime and alcohol use when compared to East Indians in other nations for those same offenses.

4. Discussion

While the Caribbean is often idealized for its climate and culture, the region experiences some of the highest rates of violence in the world. Little systematic research, however, has examined the prevalence of offending within or between nations. Assessing the prevalence of offending is important as it can guide theory and provide direction for feasible crime-reduction strategies. The present study examined self-reported delinquency, drug use, and gang membership among more than 18,000 youth attending 306 schools in nine English-speaking Caribbean nations. To our knowledge, this is one of the first cross-national studies of delinquency conducted in the Caribbean. Below,

we discuss our findings and their implications and provide recommendations for future research.

Our results support prior research identifying that the prevalence of youth offending may vary significantly within and across countries in the Caribbean. Our findings are similar to those of Junger-Tas (2012), who reported significant variation in delinquency between European nations, with the highest rates of delinquency found in Anglo-Saxon and West-European nations and the lowest rates of delinquency found in the Mediterranean and Post-Socialist nations. While our data do not permit us to examine the causal mechanisms for these differences in the Caribbean, they might be attributable to social, structural, or cultural factors. For example, prior cross-national research has shown that national-level differences in crime can be explained by variation in poverty, racial heterogeneity, urbanization, and welfare state policies (Savolainen et al., 2017; Nivette, 2011).

However, small island developing states (SIDS) are unique and more complex given their small geographic and population size, restricted economic scale and diversity, and remoteness and isolation (Herbert, 2019). On the one hand, some researchers emphasize that nations in the English-speaking Caribbean are similar due to their proximity, English heritage, and social, familial, and economic connections. On the other hand, researchers also note that each Caribbean nation is unique because of "islandness." Islandness represents a unique way of thinking that is exclusive to each island as a consequence of islander identity and physical and social isolation (Robinson et al., 2021). Vannini and Taggart (2013) argue that islandness is the result of islanders being required to "mak[e] use of whatever is at hand, solving ongoing concerns as they present themselves" (p. 225).

Researchers have emphasized that while islandness can serve as an important protection to islanders, which might, for instance, take the form of independence, loyalty, and strong community ties and cohesion (Conkling, 2007), it also can serve as a liability, and produce normative values that cause crime (Scott & Staines, 2021). Therefore, it is unclear whether islandness or island-specific-culture might be related to our finding of variation in the prevalence and nature of delinquency across English-speaking Caribbean islands. While there is a limited amount of prior peer-reviewed research and grey literature at the national level on this topic (see for example, Harriott, 2003; Heinemann & Verner, 2006; Katz et al., 2011), future research should draw upon it, and the larger body of literature from outside the region, to better understand the causal mechanisms responsible for these differences within the region.

In addition, we found that youth in the English-speaking Caribbean engage in a disproportionate amount of violence compared to other offense types. Our findings, generated through self-report data obtained from youth, are similar to those previously found through victimization surveys of adults in five Caribbean nations (Sutton et al., 2017). Among our sample, youth were 3 to 40 % more likely to report having committed a violent offense in the past year than a property offense depending on their nation of residence. Our findings can again be in part contextualized by prior research in Europe. Junger-Tas (2012), in their study of youth in 25 European nations, reported that Western European youth commit more property crime than violent crime, but youth in the Mediterranean and poorer European countries commit more violent crime than property crime. The authors noted that this was primarily due to especially high rates of property offending among Western European youth and not differences in violent crime (Junger-Tas, 2012). However, this does not seem to be the case for the Caribbean, where there appear to be especially high rates of violent offending. Using the same data as Junger et al. (2012), Gatti et al. (2011) reported that 16.3 % of European youth self-reported committing at least one violent crime in the past year. This compares to 67 to 81 % of the English-speaking Caribbean youth in our sample. These findings are remarkable when one considers that Gatti et al. (2011) included assault, carrying a weapon, and group fighting in their measure of violent offending as we did, but also included robbery, bag-snatching, and vandalism.

For as much as there is a great deal of variation in delinquency prevalence between the study nations, overall, youth from the English-speaking Caribbean appear to self-report substantially higher rates of violence when compared to other regions. As noted above, this might result from the unique social, political, cultural, and economic characteristics of small island-developing states. Sutton and Rupra (2017) attribute the Caribbean's high rates of violence to "collective trauma" from witnessing and experiencing violence over a long period of time and to the region's "high tolerance" for violence against intimate partners and children (p. 252). Knight (2019) notes that violence has been interwoven into the Caribbean culture by the West since the 1600 s through its legacy of colonialism and deployment of slavery and indentured servants. While identifying the presence of a culture of violence is beyond the scope of the present study, future research should examine whether this culture exists in the Caribbean and if it does, its various dimensions within and across nations.

Related to the above and consistent with prior Caribbean research (Ohene et al., 2005), our results also revealed that a high proportion of Caribbean youth are gang-involved, especially when compared to prior research examining large school-based samples in the United States and Europe (Esbensen & Weerman, 2005; Klein & Maxson, 2006; Nuño & Katz, 2019). This finding is important because it also helps explain the higher levels of violence and other problem behaviors observed in the present study. In particular, gang involvement has long been associated with significantly higher rates of offending. This finding suggests that Caribbean policies and programs focused on prevention, intervention, or suppression may want to consider gangs and gang membership. Prior research suggests that some interventions, when focused on gang members, such as police crackdowns and group opportunities provisions, can have a boomerang effect and increase gang cohesion, leading to increased gang joining and violence (Klein, 1997). Our findings also indicate that further research is needed to understand the causes and consequences of gang joining in the Caribbean to develop prevention and intervention programs to assist marginalized youth.

Comparable to prior research in other regions, 12-month self-reported offending was higher among males than females for every offense type across the study nations. Our findings suggest, however, that a substantial proportion of females are involved in a wide range of offending. For example, more than 60 % of females in each nation had engaged in violence, 40 % or more had engaged in property crime, and 3 to 7 % had sold drugs. These rates are considerably higher than those found in Europe (Barberet et al., 2014) and the United States (He & Marshall, 2009). In fact, the gender disparities in offending were relatively modest for all offense types except for drug sales, where males were roughly-two to five times more likely to have sold drugs in the past year. Our findings are similar to those previously reported in Europe and Central America, where it was reported that while gender differences in delinquency in the more developed European nations were pronounced, gender differences in delinquency in the less developed European nations and Latin America were smaller (Junger-Tas et al., 2004).

While the present study did not employ methods to understand the causes of the relatively high rates of female offending and the concomitant gender disparities in the English-speaking Caribbean, prior research suggests that it might be related to less gender inequality (i.e., patriarchy) within our study nations. Savolainen et al., (2017) examined the relationship between gender, delinquency, and patriarchy across 27 nations and reported that less patriarchal nations (i.e., those with less normative and structural inequality related to gender) exhibit a narrower gender gap in delinquency. Females in the English-speaking Caribbean have long resided in what Momsen (1993) refers to as a double paradox. On the one hand, English-speaking Caribbean nations are founded, at least in part, on a culture embedded in patriarchy. On the other hand, they reside "within a system of matrifocal and matrilocal families…" (p. 1). As such, the social restraints on females in these nations may be less austere, and, as a result, they might react to the same social, economic, and political forces that males experience, resulting in higher rates of offending (Savolainen et al., 2017).

Findings related to gender suggest at least three implications for policymakers and academics. First, while our self-reported measures suggest that females are involved in high levels of delinquency, this does not translate to formal processing in the justice system. Across the region, female youth account for minimal percentages of formal charges and are rarely held in detention facilities for extended periods (Freemon et al., 2020); in Trinidad and Tobago, only 6 % of juvenile defendants from 2006 to 2015 were female (Peters, 2019). Given the groups' low involvement in the formal justice system, prevention efforts have historically been male-centric, given limited resources. Indeed, some nations still lack separate youth detention facilities for females (Freemon et al., 2020).

Second, our findings suggest that the inclusion of female-focused programs could bolster violence prevention efforts. Recent research emphasizes the benefits of trauma-informed interventions with females, given common histories of physical and sexual abuse that may hold promise for the Caribbean (Miller & Najavits, 2012; Covington et al., 2008). Thus, additional research on female delinquency, focusing on the types and frequency of violent offenses females engage in, could enrich our theoretical understanding of the causal factors that influence delinquency and provide researchers outside the region with a broader understanding of crime causation.

Third, our analysis showed that females in some Caribbean nations engage in more delinquency than males in other Caribbean nations. For example, males and females in Barbados, St. Kitts and Nevis, and Dominica were more likely to self-report violence, property crime, marijuana use, and gang involvement when compared to youth, regardless of gender, in the other study nations. Once again, these findings suggest structural, cultural, and economic differences between the nations. Family socialization processes are often invoked to explain gender differences in offending. For instance, the level of attachment between a parent and child, and the extent to which a child is supervised, influence delinquency–both of which are moderated by gender (Hoeve et al., 2009). Parenting traditions such as these may differ across the study nations resulting in our findings. Other macro-level factors, such as neighborhood-level exposure to violence, modernization, gender equality, or societal patriarchal norms, some of which have been supported in research outside the Caribbean, may also inform this relationship (Zimmerman & Messner, 2010; Clark, 1989; Savolainen et al., 2017). Understanding the unique individual and societal factors that amplify female delinquency among some English-speaking Caribbean nations would strengthen researchers' and policymakers' capacity to identify the pathways to delinquency.

The relationship between ethnicity and delinquency appears just as complex. There were no significant relationships between ethnicity and problem behaviors in about half of the study nations. In the other half, Afro-Caribbean, mixed, and youth from "other" ethnic backgrounds were often significantly more likely to report delinquency than East Indian youth. These findings, when assessed within the context of the region and the generational trauma experienced through slavery, are somewhat expected. This is not to suggest that the experiences of indentured servants from East India should be minimized. East Indians, however, had "better terms of work" in that they received contracts, and formal and informal restrictions were placed on their treatment, subsequently resulting in greater rights, privileges, and economic advantages compared to Afro-Caribbean enslaved people (Brown, 2020: 45). Prior research shows that descendants of enslaved Africans, now referred to as Afro-Caribbeans, and mixed-race persons, have historically been denied opportunities and faced substantially greater oppression when compared to other ethnic groups in the Caribbean, such as East Indians, making these youth more vulnerable to delinquency.

Our findings are consistent with a wide and deep body of literature on race, ethnicity, and delinquency in many other nations. For example, a positive relationship between ethnicity and delinquency has been reported in Spain, Italy, Germany, France, Belgium, The Netherlands, Sweden, and the United Kingdom (Marshall, 1997). Some academics have argued that this relationship is at least in part related to ethnic minorities being more likely to experience poverty, unemployment, and exclusion from school (Webster, 2018). In the United States, prior research on the relationship between ethnicity and delinquency has been mixed, with differences and issues related to instrumentation and the types of offenses measured and scaling methods employeed (Elliott & Ageton, 1980). A recent meta-analysis of 54 manuscripts published since 1980 on the relationship between race and offending reported a weak but statistically significant difference between whites and blacks, with blacks slightly more likely to self-report violent offending (Sohoni et al., 2021). Similar to research in Europe, these differences have been mainly attributable to neighborhood context (Peeples & Loeber, 1994), involvement in gangs (McNulty & Bellair, 2003), poverty, family, and individual level factors (Piquero et al., 2005).

However, the precise causal mechanisms between these factors and delinquency are relatively unknown in the Caribbean. For example, Sutton and Rupra (2017) suggest that generational trauma can be directly related to tolerance of violence. However, recent research has also alluded to the relationship between experiencing racism and youths' socio-emotional development (Bécares et al., 2015). This suggests that structural factors may also be indirectly related to delinquency, given that socio-emotional development is linked to antisocial behavior. Likewise, the relatively high delinquency rates of Afro-Caribbean youth and youth from "mixed" or "other" ethnicities in these nations could result from multiple marginalization. Vigil's (1988) "multiple marginality" thesis suggests that youth who experience cultural marginalization, coupled with various forms of disadvantage, are more likely to engage in delinquency (Vigil & Yun, 2002). While these (and perhaps other) explanations might be useful for helping researchers understand the relationship between ethnicity and delinquency in some of the nations, it remains unclear why there was no relationship between ethnicity and delinquency in the remaining nations. Regardless, it is clear that there has been very little theoretical work examining the role of ethnicity in problem behavior in the Caribbean, and additional research examining the causal mechanisms of this relationship is needed.

In addition to longitudinal research, more broadly, additional research is needed to determine whether our results adequately reflect the prevalence of delinquency, drug use, and other problem behaviors among youth in general and by gender and ethnicity more specifically. As noted above, the Ministries of Education in the study nations did not have the data infrastructure to provide accurate information on the number of students by form, gender, and ethnicity, which would have allowed us to weight our data to calculate more precise estimates of problem behavior. At a minimum, however, our findings might underestimate the nature and extent of delinquency in the region. One recent study, for instance, showed that detained youth self-report significantly higher rates of violence, property crime, and drug involvement than non-detained youth (Freemon, Cheon, Katz, & Nuno, In press). More research examining normative problem behavior among English-speaking Caribbean youth is needed to more precisely determine prevalence rates among school youth and their detained peers and how rates might vary in these populations.

In conclusion, while the Caribbean region has seen increased investments to combat crime problems in recent years, a solid understanding of these problems is still being developed. The present study moves this agenda forward, offering a nuanced picture of youth delinquency in nine nations to inform future research and policy and better target interventions. Overall, the Caribbean has a unique violent crime problem, including among females. Though the region is often discussed as a unit, we found considerable variation in delinquency, drug use, and gang membership across nations with differences by gender and ethnicity.

CRediT authorship contribution statement

Charles M. Katz: Conceptualization, Methodology, Investigation, Resources, Writing – original draft, Writing – review & editing, Visualization, Supervision, Project administration, Funding acquisition. **Hyunjung Cheon:** Validation, Formal analysis, Data curation, Writing – original draft, Writing – original draft, Writing – review & editing, Visualization. **Kayla Freemon:** Writing – original draft, Writing – review & editing. **Lidia E. Nuño:** Investigation, Data curation, Writing – original draft, Writing – review & editing, Project administration, Methodology.

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Data availability

The data that has been used is confidential.

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