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Table of Contents

IUU Fishing, Transnational Crime, and Jamaica's Incomplete Policy Design <i>Kim Moloney, and Judy-Ann Neil</i>	1
Exposure to Family Violence and Bullying Perpetration: An Explanation through the Lens of the General Theory of Crime <i>Hyunin Baek, Sunguook Lee, and Randy Seepersad</i>	25
The Status of Youth Incarceration in the Caribbean <i>Kayla R. Freemon, Lidia E. Nuño, and Charles M. Katz</i>	48
Performance Measurements – The Cartwheels of the Modern Court System <i>Denarto Dennis</i>	75
Yonique Campbell, Citizenship on the Margins: State Power, Security and Precariousness in 21st-Century Jamaica. Palgrave McMillan <i>Alexandra Abello Colak</i>	100
Notes on Contributors /	104
Submission Guidelines /	107

IUU Fishing, Transnational Crime and Jamaica's Incomplete Policy Design

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Abstract

Illegal, unreported and unregulated (IUU) fishing is a crime with global reach. The links between IUU fishing and other transnational crimes are well established. With its focus on Jamaica and its territorial waters, this article evaluates the intersection of policy design and its instruments (legal-regulatory tools, economic and financial tools, and information tools) with Jamaica's attempts to curb IUU fishing. The article finds that while progress is occurring, more can be done. This includes signing key international treaties, improving data collection and analysis, deepening information exchanges, and encouraging sustained political will.

Illegal, unreported and unregulated (IUU) fishing is a global problem (Agnew et al. 2009, Sumaila et al. 2006). In 2015, the Food and Agriculture Organization (FAO) of the United Nations declared IUU fishing as one of the greatest threats to sustainable fishing and marine biodiversity worldwide (FAO 2015). The IUU fishing affects approximately one-in-five caught fish, with an estimated annual cost of US\$23 billion (FAO 2018, Havocscope 2020). In response, the FAO's Committee on Fisheries adopted an International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing in March 2001. According to the FAO, IUU fishing includes *inter alia* fishing without a permit or licence, fishing during prohibited periods, misreporting or non-reporting of information on fishing and fishing in areas where there is no conservation or management measures in place. IUU fishing is a national and transnational crime. It can exist in isolation with individual, business and/or state-sponsored acts of illegal fishing and/or alongside of, or even attract, illegal

This article does not reflect the views of the Jamaica Defence Force. The article is a partial output of my MSc in Maritime Affairs at the World Maritime University in Sweden.

Caribbean Journal of Criminology 2, 1 (2020): 1-24

activities using high seas transport methods for drugs, arms and human trafficking (Bondaroff, van der Werf, and Reitano 2015, Chapsos and Hamilton 2019, Palma, Tsamenyi, and Edeson 2010, UNODC 2011).

IUU fishing also exists within the Caribbean (Fanning, Mahon, and McConney 2011). This article situates itself within the Caribbean region but with a particular focus on IUU fishing and its interaction with transnational crime in Jamaica. Analysis is anchored at the intersection of policy design and its tools or instruments (e.g. Schneider and Ingram 1988, Trebilcock and Hartle 1982), transnational administration (e.g. Stone and Moloney 2019), fisheries and marine policy literatures specific to IUU fishing (e.g. Gallic and Cox 2006, Petrossian, Marteache, and Viollaz 2015), and the criminology and conservation criminology literatures (e.g. Rivers and Gibbs 2011, Sundström and Wyatt 2017) with observations reflective of small state challenges.

The article proceeds by highlighting the global impact of IUU fishing and transnational crime as well as its effect on Jamaica. This case study is informed by primary (government documents, databases, regional and international organization reports) and secondary document reviews (academic literature) as well as semi-structured interviews of key stakeholders.¹ By anchoring an IUU fishing analysis of Jamaica within the policy design literature, we detail how one country interacts with three categories of policy instruments: legal-regulatory (domestic and global) tools, economic and financial tools and information tools. Given that such tools construct policy action (Salamon 2011), when the tools are not present and/or are incompletely utilized, policy action remains limited. The article concludes by observing an incomplete policy design within Jamaica on IUU fishing. Only a few of the available policy design tools for combatting IUU fishing are being implemented. This is an output of the current strategic initiatives to prevent transnational crime along with the difficulties in creating appropriate legislation, augmenting marine law enforcement agencies and prosecuting those who may be guilty of such crimes.

IUU Fishing and Transnational Crime

In maritime security, IUU fishing is frequently viewed as a “non-traditional security challenge as it does not threaten the physical survival of states” (Chapsos and Hamilton 2019, 257). When Interpol created a “fisheries crime” category in 2013, its initial focus was upon illegalities

¹Interviews were conducted by Ms. Neil while completing her MSc in maritime affairs at the World Maritime University in Sweden.

around inappropriate uses of marine living resources. But as discussions deepened, such conservation crimes took on new meanings. This includes an observation that criminal networks frequently use fishing vessels to transport illicit goods (Bondaroff, van der Werf, and Reitano 2015). Thus, and as noted by US National Intelligence Council in 2016, IUU fishing is a crime with transnational implications (USNIC 2016). Shortly thereafter, Interpol created a global fisheries enforcement effort in which IUU fishing was linked to not only trafficking concerns but other crimes too. This includes modern slavery, financial crime, tax evasion, document fraud, food security, resource theft, corruption as well as typical IUU concerns about overfishing and species protection (Österblom 2014, Sundström and Wyatt 2017, Vrancken, Witbooi, and Glazewski 2019).

There are multiple studies on transnational crime and its use of marine and sea byways (e.g. Bondaroff, van der Werf, and Reitano 2015, Chapsos and Hamilton 2019, Sander et al. 2014, Vrancken, Witbooi, and Glazewski 2019). Fishing vessels provide a legal cover to help criminal networks expand their illegal operations (Chapsos and Hamilton 2019, Interpol 2017). This link becomes obvious when understanding that many fishers possess the skills and local marine knowledge to navigate harsh marine environments (UNODC 2011). Criminal networks understand this opportunity as they regard IUU fishing as a gateway to other illegal activities. Jamaica is no different. The trafficking of drugs, guns and even human beings is frequently associated with IUU fishing (UNODC 2017). The next two sub-sections describe Jamaica's interaction with IUU fishing and transnational crime.

Jamaica and IUU fishing

Despite Jamaica's status as an upper-middle-income country² with a population of 2.9 million, it faces several policy design challenges commonly associated with small states. Small states and its related island state literature have deepened in the last decade. This includes literature on the unique political, economic and financial challenges of small states (e.g. Brown 2010, Moloney 2020, 2019, Veenendaal and Corbett 2020, 2015) as well as challenges specific to fisheries in the Caribbean and South Pacific (e.g. Aiken et al. 2006, Aqorau 2000, Hassanli 2020, McConney 2015, Neil 2018, Witbooi 2020).

²Jamaica's 2019 Gross National Income (GNI) per capita was US\$5250. This makes Jamaica one of the world's 56 "upper-middle-income" countries. Upper-middle-income countries have a GNI per capita between US\$4046 and US\$12,535.

With its first marine protection area created in 1991, Jamaica currently has three marine park areas (MPAs) and two protected areas. This includes the original MPA (Montego Bay Marine Park) in 1991 along with the Negril Marine Park (1998) and the Ocho Rios Marine Park (1999). Protected areas include Portland Bight and Coral Spring/Mountain Spring (Yugorsky and Sutton 2004). The MPAs cover 1800 square kilometres or just under 9 per cent of Jamaica's archipelagic waters (Jones 2017). Jamaica's first fish sanctuary was established in Montego Bay (Bogue Lagoon) in 1979. Since then, another sixteen fish sanctuaries have been created (MICAF 2011, Alexander, Armitage, and Charles 2015). If properly designed and funded, MPAs and fish sanctuaries can become more than "paper parks" and instead, as noted in a case study of a successful MPA in Belize, places where sustainable fishing, biodiversity conservation, tourist engagement and locally led activities may prosper (Bustamante et al. 2014, 155). However, early evidence from Jamaica indicates that similar co-management plans have struggled to gain traction (Alexander, Armitage, and Charles 2015).

Like other non-wealthy small island states, Jamaica partially relies on its fisheries for its food security. It is also a source of employment for an under-skilled labour force. Fisheries directly and indirectly support the livelihood for more than two hundred thousand persons (GOJ 2008) of which approximately one-tenth are active fishers. Of the persons engaged in fishery activity in Jamaica, approximately 90 per cent of registered fishers consist of artisanal fishers while the remaining 10 per cent are industrial fishers.³

Data provided by Jamaica's Fisheries Division of the Ministry of Industry, Commerce, Agriculture and Fisheries (MICAF) indicate a consistent increase in the number of registered fishers and fishing vessels between 2006 and 2017. This includes a 40 per cent increase in the number of registered fishers⁴ and a 73 per cent increase in registered fishing vessels (MICAF 2018). At the same time, and between 2006 and 2016, Jamaica's fish production decreased by 34 per cent, with the value of domestic landings of fish decreasing by 30 per cent. This includes a landing per fisher drop in value of 41 per cent and a drop in declared revenue per fishing vessel of 57 per cent.⁵ These drops are largely attributable to altered production volumes and variable market prices. Such impacts

³Ms. Neil's personal communication with the Mr. Andre Kong, Director of the Fisheries Division, Ministry of Industry, Commerce, Agriculture and Fisheries on 28 August 2018.

⁴There were 18,076 registered fishers in Jamaica in 2007. Six per cent of the fishers were women. In 2017, there were 24,366 fishers of which 6.4 percent were women.

were further hampered by an inflation rate averaging 9.1 per cent between 2006 and 2016 (World Bank 2020).⁶

Jamaica's "coastal waters are among the most overfished in the Caribbean" (Waite et al. 2011, 5). IUU fishing is a leading cause of dwindling fish stocks in Jamaica along with concurrent biodiversity losses within stressed reef fisheries (Waite et al. 2011). Fish stock rarefaction along Jamaica's coastline forces fishers to travel farther and make more frequent trips to maintain their livelihoods (Jones 2017). This increases fisher operational expenses and negatively impacts livelihoods. It has been estimated that Jamaica loses approximately US\$10 million annually of spiny lobster, queen conch and finfish catch due to foreign industrial fishers engaging in IUU fishing.⁷ This is particularly relevant given a Caribbean export emphasis on "high value species, such as spiny lobster, Queen Conch and shrimp" (WECAFC 2019, 4). Although fisheries and aquaculture are just 1 per cent of the GDP in the Western Caribbean and Central Atlantic region (WECAFC 2019), foreign- and/or locally led IUU fishing creates an important secondary loss of tax revenues (Sander et al. 2014). This includes lost revenues from fisher registration, licensing and landing fees as well as the associated lost revenues via payroll and corporate taxes. This revenue loss extends to Jamaica's tourism sector in which fewer coral reef activities and/or sports fishing opportunities cost Jamaica's tourism sector approximately US\$19 million per year (Waite et al. 2011).

Jamaica, transnational crime and IUU fishing

Scholarly studies of transnational crime within Jamaica have a long and notable history (e.g. Harriott 2004, Harriott and Jones 2016, Johnson and Soeters 2008). While Caribbean- and Jamaica-focused IUU fishing studies do exist (e.g. Aiken et al. 2006, McConney et al. 2016, Waite et al. 2011), such studies have only recently begun to link IUU fishing to transnational crime in Jamaica (Neil 2018, Witbooi 2020). Jamaica is not alone in having its seas be used for IUU fishing and transnational crimes. Similar linkages

⁵These data are important. But it may also not be the full story. The data are reliant on full fisher reporting of their catch, the data cannot surmise what other activities may occupy a fisher's time and resources or how many landings went unreported. It also cannot determine whether all catches were declared or whether fishers turned to other sources of income whether legal (e.g. tourism) or illegal (e.g. IUU fishing; guns and/or drugs trafficking).

⁶Between 2017 and 2019, Jamaica's average annual inflation rate was 4.0 per cent (World Bank 2020).

⁷Ms. Neil's personal communication with the Lt Cdr Paul Wright, chief executive officer of the Fisheries Division within MICAFA on 22 August 2018.

have also been observed in Indonesia (Chapsos and Hamilton 2019), South Africa (Sundström and Wyatt 2017), off the coast of African countries and in the Pacific (Liddick 2014, Witbooi 2008).

While some Jamaican fishers purposefully engage in transnational crime and/or are targeted for such activities by unscrupulous boat operators, we underline a crucial point: not all fishers in Jamaica are engaged in either IUU fishing and/or transnational crime. Where such interactions exist, maritime drugs and arms trafficking are primarily committed by boat operators who have adequate seamanship skills. There is a growing perception that the decline in fishery resources may encourage Jamaica's most vulnerable fishers to also engage in illegal activities (Neil 2018). As such, Jamaica's vulnerable fishers and boat operators have been, and continue to be, targeted for transnational crime purposes. The use of fishing vessels to commit IUU fishing can become a gateway to other illegal activities including money laundering, tax evasion, corruption and bribery (Bondaroff, van der Werf, and Reitano 2015, Sander et al. 2014).

Broadly stated, large-scale IUU fishing is often considered a low-risk criminal activity. This is due to its low probability of arrest and a frequent limitation in penalty severity (Gallic and Cox 2006, Petrossian 2015a, Lindley and Techera 2017). With such low risks and Jamaica's geostrategic location between South and North America, its territorial waters and exclusive economic zone are prime targets for criminal networks. As a transshipment point for cocaine trafficking, its waters are also used to traffic marijuana from Jamaica to neighbouring island states, the Americas and Europe (UNODC 2018, USG 2018). To enhance a trafficker's chance of success, perpetrators routinely utilize go-fast boats, fishing vessels, commercial ships and pleasure crafts. It is not unusual for cocaine and marijuana traffickers to also use local artisanal fishing vessels registered in Jamaica (USG 2018) as well as commercial fishing vessels from the Cayman Islands and Honduras.⁸

The links are evident with a growing "drugs for guns" trade between criminal elements in Haiti and Jamaica. This neo-bartering system happens via traffickers departing Jamaica with compressed marijuana in fishing canoes and returning from Haiti with illegal firearms. This trade was documented as early as 2007 (Neil 2018). It involves traffickers using fishing canoes to blend in with other legal fishers. This drugs for guns

⁸Ms. Neil's personal communication with the deputy unit executive officer, air operations unit, RCIPS on 28 August 2018 and an artisanal fisher from Honduras on 1 September 2018, who wishes to remain anonymous.

model was the precursor to a more recent marijuana for cocaine trade. Anecdotal evidence suggests that the routes used by IUU fishers are also used to engage in drugs and arms trafficking. This includes the illicit trade between Haiti and Jamaica, where marijuana⁹ from Jamaica is bartered for cocaine in Haiti. Open hull fishing canoes from Jamaica are used to transport between 350 and 1600 kilograms of marijuana to Haiti.¹⁰ The marijuana for cocaine trade also exists with fishing vessels from other countries.¹¹ In particular, fishing vessels and go-fast boats from Costa Rica and Honduras as well as Guyanese fishing vessels have engaged in "mothership" operations to offload drugs several nautical miles offshore and onto local fishing canoes.¹² Furthermore, even when traffickers are detected at sea, many will jettison their illegal firearms and contraband overboard¹³ before they are boarded and searched. This situation is further compounded in that the canoes are made of fiberglass and, thus, are difficult to detect by the radars of Jamaican Defence Force Coast Guard Offshore Patrol Vessels. Detection is even more problematic in choppy seas.

Arms trafficking in Jamaica is primarily done by maritime conveyance along established routes from both North and South America. The firearms which are trafficked from Honduras and Costa Rica by fishing vessels to Jamaica are primarily pistols and revolvers.¹⁴ There is the appearance of an alliance between arms and drug traffickers in the Caribbean, particularly with regard to Jamaica (Griffith 1997, Neil 2018).¹⁵ The societal impact of such trade has negatively affected Jamaican society since the 1980s. In 2018, Jamaica's homicide rate was 47 per one hundred thousand inhabitants. This rate is three times higher than the Latin American and Caribbean average (OSAC 2020). With just over 250 gangs operating in Jamaica (Leslie 2010), violence is the output.

⁹Jamaica is the main marijuana producer and supplier to the Americas (UNODC 2018) and wider Caribbean region (USG 2018).

¹⁰Ms. Neil's personal communication with an MICAF source on 23 August 2018, who wishes to remain anonymous.

¹¹Information received by Ms. Neil from an MICAF source on 23 August 2018, who wishes to remain anonymous.

¹²Information received by Ms. Neil from an MICAF source on 23 August 2018, who wishes to remain anonymous.

¹³Anecdotal evidence suggests that what is thrown overboard has locator beacons, so that when the coast is clear, the boats return to that location, retrieve their items and continue with the trafficking.

¹⁴Ms. Neil's personal communication with an MICAF staff on 23 August 2018, who wishes to remain anonymous.

¹⁵The majority of the illegal gun trade into Jamaica does not come via IUU fishing but instead via Jamaican ports.

Both gang warfare and the presence of illegal firearms are major contributors to Jamaica's high homicide rate (Harriott and Jones 2016).

The interconnections among IUU fishing, transnational crimes and negative socioeconomic outputs require an effective public policy response. Policies created within one ministry or security apparatus will affect another institutional actor whether non-governmental or not. The next section engages the policy design and related legal-regulatory, economic and financial, and information tool literatures to explore how ongoing policy design (in)effectiveness interacts with IUU fishing and transnational crime in Jamaica.

Jamaica's Incomplete Policy Design

Good public policy is essential to socioeconomic development. Good policies are well designed, reflect available data, engage appropriate policy design tools and encourage effective implementation. Policy design tools are the mechanism by which policies and the actions of administrative and policy states (as well as regional and international organizations) help solve public policy problems. Policies and their tools may be developed within a state or international organization that transnationally administers and/or encourages IUU fishing policies to be transferred among states, within states and across international organizations. Policy transfer can be coercive, voluntary or some combination (Dolowitz and Marsh 1996, 2000). This combination may vary by policy and even across policy sub-components.

IUU fishing is a national and global public policy problem. And yet, both the policy design literature and the broader discipline of public policy have largely ignored IUU fishing. Instead, IUU fishing scholarship is frequently located within the marine sciences and/or environmental change literatures. Criminological studies of IUU fishing (Österblom 2014, Sander et al. 2014) do exist, but there is infrequent interaction of IUU fishery literatures with the discipline of public policy, its policy design sub-field and those who study the instrumentation of policy design.¹⁶

There is an expansive literature on policy design and its instrumentation. Studies usually focus on the state. More recently, policy design and instrument scholars have engaged multilevel governance (Thomann, Trein, and Maggeti 2019) and transnational administration (Chou and

¹⁶Our literature review found no recent discussion of IUU fishing and policy design within prominent public policy journals.

Ravinet 2019). Given largely non-existent scholarly interaction among the policy design literature, IUU fishing literature and studies of Jamaica or the broader Caribbean, we have used the simplest categorization of policy design tools: legal-regulatory, economic and information.¹⁷ This limits our discussion to observations about whether such a tool or instrument is present. It cannot engage, in a single paper, tool-specific literatures, contextualized and detailed reasons for (non-)implementation or even tool appropriateness for Jamaica's policy environment (e.g. Kassim and Le Gales 2010, Schneider and Ingram 1998, Trebilcock and Hartle 1982). Instead, each category's current and potential relationship to limiting IUU fishing in Jamaica is discussed. The interaction of each policy design tool with criminological studies of IUU fishing along with any implications for transnational administration are also included, where relevant, to underline the importance of this challenge for Jamaica.

Legal-regulatory tools in the domestic arena

The law and related regulation are important instruments for structuring policy implementation. Laws set the underlying framework from which regulatory actions may arise. There are many reasons for direct regulation. IUU regulatory necessity increases where the assurance of a public good and the minimization of moral hazard are required, environmental externalities are present as well as unequal bargaining powers among affected actors (Rivers and Gibbs 2011, Witbooi 2008). Add-in information inadequacies, and public-sector planning that lacks political will and engages in short-term thinking, result in fewer longer-term protections for Jamaica and its marine environment. This sub-section begins its analysis with domestic legal-regulatory tools before engaging the legal-regulatory tools at regional and global levels, which influence Jamaica's policy design.

The creation of appropriate national laws is crucial for reducing IUU fishing. Although Jamaica's 2018 Fisheries Act legislated new licenses and increased penalties for IUU fishing, it has already been suggested that its penalties may not be enough to deter IUU fishing (Serju 2019, Witbooi 2020).¹⁸ Depending on the IUU incident, fines in Jamaica range from J\$30,000 (US\$206) to J\$3 million (US\$20,626).¹⁹ Such fines are nominal

¹⁷Roughly similar categories (regulation, economic instruments and communication) have been used by conservation criminologists who study wildlife management and land use (e.g. Rudolph 2017).

¹⁸Imprisonment options between 3 months and 3 years. Given the Act's recent passage, there is insufficient data on who is or is not imprisoned for IUU fishing in Jamaica. More generally, questions about Jamaica's ability to prosecute and imprison guilty individuals have had an extensive scholarly discussion (e.g. Foglesong 2007, Harriott 2016).

when compared to the values extracted by IUU fishing. Appropriate fine creation and its enforcement are essential to deterrence (Bondaroff, van der Werf, and Reitano 2015). The 2018 Fisheries Act, which replaced the 1976 Fishing Industry Act, also does not explicitly link IUU fishing to transnational crime. The Enforcement Provisions within Part XIII of the 2018 have a near-exclusive focus upon IUU fishing while taking care to not relate other transnational crimes to IUU fishing. This decision hurts the policy discussion outputs.

Domestically, indirect regulatory activities may also assist in IUU fishing reductions. Indirect regulatory tools may include voluntary or incentive-based regulation whereby compliance plans are created by the associated ministries, departments and agencies as well as private companies. In engaging with such plans, stakeholders may obtain grace periods against state-led action, receive a tax benefit, obtain the positive press from succeeding within a government-led "challenge program" aimed at compliance and/or other sweeteners to engagement. We could find no evidence of such indirect regulatory tools in Jamaica's interaction with IUU fishing.

Another indirect regulatory tool is engaging in public consultations²⁰ and/or the creation of associational actors and related industries to influence policy design on IUU fishing. In the European Union, Regional Advisory Councils (RACs) include non-state stakeholders, fishermen, industry actors, scientists and environmentalists. Each has an interest in fisheries governance; and in the case of the Baltic Sea Regional Advisory Council, each stakeholder's "knowledge claim" cross-fertilizes outside typical "science-policy relationships" (Linke, Dreyer, and Sellke 2011, 135). This type of regional fisheries governance with its explicit and sustained inclusion of non-state stakeholders is different from the state-led Caribbean Regional Fisheries Mechanism (CRFM). Although Caribbean non-government stakeholders have not created a fisheries RAC,²¹ there are equivalent non-fisheries examples in Jamaica. This includes the "Matalon Committee" of 2004–2005 which pre-dated substantial tax reform as well as a business, NGO and labour "Incentives Working Group" which helped Jamaica's Ministry of Finance, Central Bank and the International Monetary Fund between 2009 and 2017.

¹⁹1 US\$ = 145 J\$.

²⁰Consultation is not the same as collaboration (e.g. Keast 2007). For a Jamaican context, see Moloney (2013).

²¹Opportunities for the Caribbean Network of Fisherfolk Organisations (CNFO) to interact with other Caribbean mechanisms have been deemphasized in the region (McConney 2016).

The policy design literature suggests that while legal-regulatory tools may provide initial assistance, effective implementation matters. For example, a typical fishery regulation involves the issuance of fishing permits or licences. Issued on a seasonal basis with limited awarded licenses, licensing allows the state to control who obtains a license (input control) and a fishing quota per license (output control). But to implement this regulation, effective enforcement is required. This may include increased sanctions, improved judicial mechanisms, imprisonment, loss of future licenses, among others (Liddock 2014, Rudolph and Riley 2017, Sander et al. 2014). Historically in Jamaica and the wider Caribbean region, prosecuted fishers normally do not forfeit their vessels (CRFM 2013). However, this trend is showing signs of change. In March 2019, two Dominican Republic fishing vessels were stopped by the Jamaican Defence Force Coast Guard for fishing illegally in Jamaican waters for Queen Conch, spiny lobster, crab, finfish and octopus. The captains and crews of the vessels were later convicted along with the forfeiture of their vessel (JIS 2019).

More complex regulatory actions beyond license and quota issuance are also possible. This includes actions that require advanced surveillance, proactive and well-funded marine law enforcement agencies, and a strengthened regulatory environment. This includes "vessel monitoring schemes designed to 'reduce anonymity', observer schemes design to 'strengthen formal surveillance', licensing schemes for fisheries grounds designed to 'control access to facilities', and 'catch inspection schemes designed to 'screen exits'" (Petrossian and Clarke 2014, 74). Each are infrequently located within Caribbean legislation. Jamaican legislation is no different.

IUU fishing thrives in states with ineffective public-sector management systems to protect their marine resources (Martini 2013) along with limited maritime law enforcement capacities (Bondaroff, van der Werf, and Reitano 2015). Jamaica has 240,000 square kilometres of maritime waters along 1,022 kilometres of rugged and open coastline. Within a maritime area that is 24 times larger than its main island (Jones 2017), Jamaica faces significant monitoring, control and surveillance challenges. With over 300 coves and inlets that can accommodate illegal activities and its geostrategic location between major drugs and gun trafficking routes, Jamaica's under-resourced marine law enforcement agencies struggle to counteract transnational maritime crimes (USG 2018).²²

²²Between 2011 and 2017, the Jamaican Defence Force Coast Guard seized just under 9000 pounds of marijuana from maritime interdictions. Of the approximately 66.6 million pounds produced in Jamaica per year, 43 per cent of the crop remains in Jamaica (Anonymous 2019a, JDF 2018).

Such enforcement, when combined with accurate "intelligence processes in assembling, organizing, and processing information," is a useful deterrent (Sander et al. 2014, 6). As a partial step forward, Jamaica has recently acquired a marine patrol aircraft to conduct surveillance and reconnaissance missions, two offshore protection vehicles, several inshore patrol vessels and two unarmed aerial vehicles (Anonymous 2015, JIS 2017, USG 2019, 2020). In addition, the Jamaican Defence Force recently created the maritime, air and cyber command where additional aircraft, vessels and helicopters are scheduled to be procured (Anonymous 2019b, JDF 2018).

Nevertheless, Jamaica remains challenged with enforcing its maritime area. Challenges common to small island states include implementing regulations such as vessels not having a Seamen's Book in their possession, carrying fraudulent documents on-board, disguising vessel origins, improperly flagging the vessel and/or illegal trading of licenses across boat owners (Chapsos and Hamilton 2019, Liddick 2014). Insufficient regulatory enforcement leads to environmental losses but also "losses in terms of bunkering, port dues, vessel maintenance, and revenue derived from transshipment fees" (Liddick 2014, 301). It also encourages "flags of convenience" where vessels fly the flag of countries not party to regional agreements on fisheries and/or transfer of fish land at "ports of convenience" either where illegal catches are not monitored or where corruption persists. This allows such catches to be sold on the international markets (Petrossian and Clarke 2014, 2015, Sander et al. 2014).

Legal-regulatory tools in the regional and global arena

Domestic legal-regulatory action is strengthened when it partners with regional and international agreements and/or creates context-appropriate policy transfers between supranational agreements and the state's legal-regulatory apparatus. Regional and international action to stop IUU fishing occurs via international hard law (e.g. treaties, conventions) as well as soft law activities (e.g. regional and international working groups). As a result of increased global attention on IUU fishing, an International Consortium on Combating Wildlife Crime (ICWC) was created in 2010. This consortium includes Interpol (a transgovernmental organization with national policing organizations as its members), the United Nations Office on Drugs and Crime, the World Bank, the World Customs Organization and the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and

Flora within the United Nations Development Programme. One of the most important among the wildlife crimes that the ICCWC focuses upon is IUU fishing.²³

Bilateral maritime agreements between neighbouring states are a common legal mechanism to regularize maritime relations. However, at present, there is currently no maritime agreement between Jamaica and Haiti, Jamaica and the Cayman Islands (territory of the UK), and Jamaica and Honduras. Each state is a hotspot for IUU and transnational crime interaction with Jamaica. Such bilateral agreements, if created and ratified, might deepen bilateral cooperation. Nonetheless, when and where such agreements are created, the potential for abuse by the more powerful actor remains (Witbooi 2008) unless the weaker state's legal and regulatory structures along with political will are sufficiently responsive. Policy design, its instrumentation tools and its implementation matter.

At the regional level, the CRFM and the Caribbean Community (CARICOM) created the legally binding Common Fisheries Policy which entered in force in 2014. Despite policy promulgation, challenges exist. This includes how to interact with non-member states who engage IUU fishing within the region but also how to create coalitions among member states who may have alternative visions of how to manage fish stocks which straddle national boundaries, issues with policy creation using incomplete data, insufficient cohesion on the region's "blue economy" and how to handle economies where fish catches form a significant part of the local diet (Hassanli 2020, Lodge et al. 2007, Pintassilgo et al. 2010, Oanta 2018).

Since the creation of the United Nations Convention on Law of the Sea (UNCLOS) at a December 1982 conference in Montego Bay Jamaica, multilateral agreements involving sea management and related fisheries have proliferated (Oanta 2018). While Jamaica is a UNCLOS signatory and was the fourth signatory to major FAO legal instruments such as the UN Fish Stock Agreement (1995) with 168 state parties, Jamaica has not signed FAO Compliance Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (1993) with 40+ state parties.²⁴ Jamaica has also

²³It is unclear whether this global objective translates to the Caribbean. The region's WCO headquarters are located in St. Lucia and interacts with the St. Lucia-based Joint Intelligence Office of the Caribbean Customs Law Enforcement Council. However, in the authors' review of this website, it was unclear whether ICCWC fisheries engagement are prioritized.

²⁴Caribbean signatories include Barbados, Belize, St Kitts and Nevis, and St. Lucia.

not signed the FAO Port State Measures Agreement (PSMA) of 2009 with 67 state parties.²⁵ Jamaica also does not participate in the Global Record of Fishing Vessels, Refrigerated Transport Vessels and Supply Vessels. A search of the Global Record database indicates no data interaction between Jamaican ports and the Global Record at the FAO (FAO 2020). Jamaican involvement in a 1995 FAO Code of Conduct and its four international plans of actions (seabirds, shares, fishing capacity and IUU fishing) is harder to quantify as plan is voluntary and does not require a member-state signature. Nonetheless, for the IUU fishing Plan, eighteen countries (including Antigua and Barbuda, Belize, and St Kitts and Nevis) have created national plans to implement relevant IUU fishing codes. Jamaica is not one of them.

Each of the non-signed multilateral agreements and Jamaica's non-participation in the Global Record further indicates a partial interest by Jamaica²⁶ to address IUU fishing and its link to transnational crime. If signed, the agreements would require Jamaica to pass new legislative instruments that empower relevant government actors to match global standards. Although ratification of an international legal agreement is just one step toward reducing IUU fishing (Palma, Tsamenyi, and Edeson 2010), Jamaica's global disengagement could be perceived as indicative of insufficient political will to deter IUU fishing. The failure to ratify, especially as a small island state, also means that when international meetings do occur, such as the 2017 PSMA meeting where its operationalization was discussed, newly created funding mechanisms to help developing country member states and/or to assist capacity development exercises (FAO 2017) cannot be accessed by Jamaica.

Economic and financial tools

Three types of economic and financial tools may be used by states to deter IUU fishing. This includes cash-based direct transfers, user fees and indirect transfers. Cash-based tools are a direct transfer between the state and an affected citizen or group. This may include grants, subsidies and user fees. Grants are the direct provision of cash from the government to a recipient. In the prevention of IUU fishing arena, this may include study grants for further education, grants to fisher folks to obtain an initial license or grants to purchase specialized equipment. Subsidies occur when a

²⁵Caribbean signatories include Bahamas, Barbados, Cuba, Dominica, Grenada, Guyana, St. Kitts and Nevis, St. Vincent and Grenadines, and Trinidad and Tobago.

²⁶This partial interest is not exclusive to either of Jamaica's two main political parties.

government reduces the cost of a good either to encourage the use of that good (specialized equipment purchases) or to assist those with limited means to compete against well-financed competitors. This is particularly important in countries where, as in South Africa, "powerful local elites [are] hijacking the opportunities of *bona fide* fishers" (Hauck 2008, 639).

In line with the World Trade Organization's Doha Round, a ministerial conference in 2017 and Goal 14.6 within the UN's sustainable development goals, there are in-process global discussions about what is or is not an acceptable fisheries subsidy (Chou and Ou 2016, WTO 2020).²⁷ Fish subsidies that may be discontinued upon conclusion of global negotiations include those which target vessel acquisition and repair, encourage vessel transfers to third countries, provide operating cost support, engage fishery-focused port infrastructure, income and price supports along with subsidies that help locals access foreign waters (Chou and Ou 2016). In the Caribbean, such subsidies go beyond typical interactions to also include "subsidised fuel, duty concessions on the purchase of fishing gear, equipment, fishing boats and engines, and subsidised loans to fishers" (Palma, Tsamenyi, and Edeson 2010, 106). Jamaica's recent hosting of a WTO Regional Workshop on Fisheries Subsidies further deepened Caribbean-specific conversations (Anonymous 2019c).

In contrast, user fees may be used to discourage the consumption or production of a good and/or to raise government revenue. User fees, for example, on fishing license purchases may raise revenue for a government even if a fee's revenue potential is not its only purpose. Such user fees may offset government costs and, thus, reduce the taxpayer burden to finance such activities. In addition, economic incentives common to wildlife management may also be transferable to reduce IUU fishing. This includes policy design focused on loss compensation programs, conservation performance payments and cost sharing via government or civil society actions (Rudolph and Riley 2017).

Indirect transfers include tax incentives to encourage non-fisheries tax compliance, the limitation of government royalties to encourage foreign investment in sustainable and compliant fishing or even excise taxes to limit consumers from eating fish which may be threatened but not yet on an endangered species list. When combined with efforts to tax IUU fishing with via "accruals taxation" or other methods for less sophisticated economies, this can "hit the beneficial owners of IUU fishing operations

²⁷For more information on fishery subsidies and international trade agreements, see Palma (2010), pp. 106–108.

where it hurts – their pockets” (Bender and Lugten 2007, 518). There has been limited interaction of such indirect transfer options within Jamaica to reduce IUU fishing.

Further research on how economic and financial tools may reduce IUU fishing in the Caribbean is required. While Jamaica does offer fishing and vessel licenses, ongoing public- and industry-specific conversations about which tools should be prioritized are also required. This includes conversations which are anchored in questions of social justice, network power and inequity (Alexander, Armitage, and Charles 2015, Hauck 2008). Successful conversations will help Jamaica support its local fisheries industries while also showcasing Jamaica’s commitment to reduce IUU fishing.

Information tools

Typical information tools used by policy designers help disseminate information, collect information and knowledge, and release previously collected information. Information tools that encourage message dissemination often involve exhortation or moral suasion. They may be found on government-sponsored billboards, pamphlets shared with involved persons, public awareness campaigns and/or product labelling to encourage pro-environment behaviours, among others. Such tools can be effective short-term solutions while longer-term policy shifts are under discussion or where full compliance is not needed to witness positive policy impacts. In other contexts, campaigns that target illicit products or illegal activities involving elephants, rhinos and tigers (Sundström and Wyatt 2017) have been shown to alter local sentiments. Across the region, an online search for CARICOM’s Common Fisheries Policy frequently links to an easy-to-read fact sheet that was partially financed by the European Union (CRFM 2020).

Information tools may also disseminate news about updated regulations and what happens if there is non-compliance. This may include previews of future action such as no longer just releasing vessels who engage in overfishing but as suggested in an article on Queen Conch overfishing, “more stringent fines and forfeitures need to be considered by the authorities to produce real disincentives to poachers” (Aiken et al. 2006, 339). This is particularly difficult when “fisheries resources are sold out to foreign fleets from distant water fishing nations” (Liddick 2014, WECAFC 2017a, 3). In Jamaica, the MICAF creates radio announcements to remind fishers when the lobster and conch seasons end. Similar radio spots have reminded fishers about fish stock maintenance and, in particular, the

importance of releasing caught immature fish. Such tools are useful when it is difficult in the near-term to sanction non-compliant individuals. Sharing information helps send a message about a state's desire to limit IUU fishing.

Information collection tools include increased statistical and national planning agency involvement with the issue, interaction with associated ministries and the creation of a well-informed analysis for policy designers (Sander et al. 2014). The question of applicable data, accurate inventory stocks and fishing catch data remains an ongoing issue in the Caribbean (WECAFC 2017b). This includes insufficient clarity on what is reported as fished by the authorities reflects actual fisher catches. Instead, fishers may engage in "high grading" where only high-quality fish are retained onboard while lower quality fish, which may already be dead, are thrown overboard and thus not reported (Liddick 2014). As noted at the first joint regional meeting on IUU fishing in the Caribbean in 2017, "very few WECAFC Members that are responsible for high sea fishing fleets know where their vessels are, and/or what they are doing" (WECAFC 2017, 3). Good policy design requires accurate data. These data involve more than vessel registries that "compete for having the most vessels in their registry, aiming for volume over quality of service" (WECAFC 2017, 3). This includes observations in the mid-2000s about "poor high seas enforcement by Jamaican authorities" to protect the queen conch (Aiken et al. 2006). Without enforcement, the largely sedentary queen conch is easily overfished.

Information release tools such as sharing polling data, using Jamaica's Freedom of Information Act, encouraging fishers and involved stakeholders to blow the whistle, and other investigatory means (via NGOs, think tanks and investigative journalism) may also influence policy design. To date, there has been limited discussion of such information tools in relation to IUU fishing in either Jamaica or the broader Caribbean.

Conclusion

Jamaica remains vulnerable to IUU fishing and its links to transnational crime. Our findings do not indicate a complete policy design failure. Jamaica's engagement with CRFM, its passage of new legislation, new maritime defence purchases and its efforts to disseminate information are notable improvements. Future steps include signing key international treaties; improving its analysis of licenses, catches, vessel flagging and port usage; deepening information exchanges; evaluating Fisheries Act

of 2018 limitations; and monitoring of how new maritime enforcement purchases alter incentives for IUU fishing and transnational crime.

Jamaica is not unaware of global and regional best practices. Instead, what is witnessed is an incompletely conceptualized policy environment that limits Jamaica's ability to effectively combat IUU fishing. Jamaica's membership in affiliated international organizations with IUU fishing arrangements does not imply Jamaica is a party to relevant treaties. Despite Jamaica's hosting of the 1982 UN Conference in which the Law of the Sea was created, Jamaica has been largely absent from the global technical treaties, conventions and databases which endeavour to limit IUU fishing. While Jamaica is not the only Caribbean country with such absences, Jamaica's extensive marine seas and its locational links to transnational crime networks highlight case importance.

Key to any forward movement is policy "translation" (Stone 2012). This includes acknowledging that transferred policies and their instruments must be localized. "Copy and paste" policy design from one jurisdiction to another or from global to local without engaging epistemic communities is likely to fail. This "norm localisation" is necessary for successful policy transfer (Stone 2020, 11). Localization allows leaders to learn which tool-based designs are most appropriate (May 1992, Peters 2000) for obtaining preferred policy outputs.

The possibility for future within-Caribbean policy transfer, translation and design exists if appropriately contextualized. For example, in a study of the Hol Chan Marine Reserve in northern Belize, the authors detailed how reserve management had been successfully implemented. This included multiple legal-regulatory tools (regulation, "no-take areas", relevant restrictions, exclusive fishing to locals, enforcement capability via patrols, permits for snorkelling/diving, appropriate signage within the reserve, zoning rules), financial and economic tools (revenue generation via user fees at reserve entrance, fundraising programmes, financial planning, contingencies for natural damages via hurricanes, a board of trustees "with financial and advisory responsibilities") and information tools (education and outreach of schoolchildren, the local population and visitors, qualified on-site staff, research program; Bustamante et al. 2014, 3–4). This best practice model, anchored within a Caribbean context, may have applicability to Jamaica.

More generally, if Jamaica wishes to limit IUU fishing, other issues must also be addressed. This includes encouraging political leaders to prioritize the issue, a sustained decision to allocate limited fiscal resources to deter IUU fishing and efforts to ensure Jamaica's judicial system is

capable of adjudicating illegal actions as well as generalized efforts to improve policy compliance (Palma, Tsamenyi, and Edeson 2010). Each issue has historically been hampered by Jamaica's low-trust sociopolitical environment (Powell, Bourne, and Waller 2006) and an insufficient human resource to evaluate when and where IUU fishing concepts may be transferred and modified to Caribbean contexts.²⁸ There is no magic policy design pill or perfect design instrument or tool. Instead, multiple small-step policy design improvements can send a message not only to civil servants and defence force personnel within Jamaica that their work matters but also to Jamaica's fisherfolk, its environmentalists, its business owners and its populace that Jamaica is serious about implementing regional and global standards to combat, deter and eliminate IUU fishing.

References

- Agnew, D. J., J. Pearce, G. Pramod, T. Peatman, R. Watson, J. R. Beddington, and T. J. Pitcher. "Estimating the Worldwide Extent of Illegal Fishing." *PLoS One* **4**, no. 2 (2009): e4570.
- Aiken, K., A. Kong, S. Smikle, R. Appeldoorn, and G. Warner. "Managing Jamaica's Queen Conch Resources." *Ocean & Coastal Management* **49** (2006): 332–341.
- Alexander, S., D. Armitage, and A. Charles. "Social Networks and Transitions to Co-Management in Jamaican Marine Reserves and Small-Scale Fisheries." *Global Environmental Change* **35** (2015): 213–225.
- Anonymous. *Drone Monitoring of Island's Fishing Territory Moves Closer*. Jamaica Observer, 2015.
- Anonymous. Briefing: GDP Will Skyrocket If Jamaica Legitimises Ganja. *The Gleaner*, 2019a.
- Anonymous. Gov't to Expand New JDF Unit. *The Gleaner*, 2019b.
- Anonymous. *Jamaica Hosts WTO Regional Fisheries Workshop on Fisheries Subsidies*. *The Gleaner*, 2019c.
- Aqorau, T. "Illegal Fishing and Fisheries Law Enforcement in Small Island Developing States: The Pacific Islands Experience." *The International Journal of Marine and Coastal Law* **15**, no. 1 (2000): 37–63.
- Bender, P., and G. Lugten. "Taxing Illegal Fishing (A Proposal for Using Taxation Law to Reduce Profiteering from IUU Fishing Offences)." *The International Journal of Marine and Coastal Law* **22**, no. 4 (2007): 517–544.
- Bondaroff, T. N. P., W. van der Werf, and T. Reitano. *The Illegal Fishing and Organized Crime Nexus: Illegal Fishing as Transnational Organized Crime*. Geneva: Global Initiative against Transnational Organized Crime and The Black Fish, 2015.

²⁸See, for example, efforts by the Bahamas to modify US best practice (Lacey Act) for local contexts (WECAFC 2017, 6).

- Brown, D. R. "Institutional Development in Small States: Evidence from the Commonwealth Caribbean." *Halduskultuur – Administrative Culture* **11**, no. 1 (2010): 44–65.
- Bustamante, G., P. Canals, G. Di Carlo, M. Gomei, M. Romani, H. Souan, and A. Vanzella-Khoury. "Marine Protected Areas Management in the Caribbean and Mediterranean Seas: Making Them More than Papers Parks." *Aquatic Conservation: Marine and Freshwater Ecosystems* **24**, no. Supplement 2 (2014): 153–165.
- Chapsos, I., and S. Hamilton. "Illegal Fishing and Fisheries Crime as a Transnational Organized Crime in Indonesia." *Trends in Organized Crime* **22**, no. 3 (2019): 255–273.
- Chou, Y., and C-H. Ou. "The Opportunity to Regulate Domestic Fishery Subsidies Through International Agreements." *Marine Policy* **63**, no. January (2016): 118–125.
- Chou, M. H., and P. Ravinet. "Designing Global Public Policies in the 21st Century." In *Oxford Handbook of Global Policy and Transnational Administration*, edited by Diane Stone, and Kim Moloney, 437–452. Oxford: Oxford University Press, 2019.
- CRFM (Caribbean Regional Fisheries Mechanism). *Caribbean Community Common Fisheries Policy (CCCFP)*. Belize City: Caribbean Regional Fisheries Mechanism, 2020.
- Dolowitz, D. P., and D. Marsh. "Who Learns from Whom: A Review of the Policy Transfer Literature." *Political Studies* **44**, no. 2 (1996): 343–357.
- Dolowitz, D. P., and D. Marsh. "Learning from Abroad: The Role of Policy Transfer in Contemporary Policy-Making." *Governance* **13**, no. 1 (2000): 5–23.
- Fanning, L., R. Mahon, and P. McConney. *Towards Marine Ecosystem-Based Management in the Wider Caribbean*. Amsterdam: Amsterdam University Press, 2011.
- FAO (Food and Agriculture Organization). *Combating IUU Fishing in the Caribbean Through Policy and Legislation*. Rome: Food and Agricultural Organization, 2015.
- FAO (Food and Agriculture Organization). *First Meeting of the Parties to the FAO Agreement on Port State Measures*. Oslo: Food and Agricultural Organization, 2017.
- FAO (Food and Agriculture Organization). *Growing Momentum to Close the Net on Illegal Fishing*. Rome: Food and Agricultural Organization, 2018.
- FAO (Food and Agriculture Organization). *Global Record of Fishing Vessels, Refrigerated Transport Vessels and Supply Vessels*. Rome: Food and Agricultural Organization, 2020.
- Foglesong, T., and C. Stone. *Measuring the Contribution of Criminal Justice Systems to the Control of Crime and Violence: Lessons from Jamaica and the Dominican Republic*. Cambridge: Harvard University, 2007.
- Gallic, B. Le, and A. Cox. "An Economic Analysis of Illegal, Unreported and Unregulated (IUU) Fishing: Key Drivers and Possible Solutions." *Marine Policy* **30**, no. 6 (2006): 689–695.

- GOJ (Government of Jamaica). Draft Fisheries Policy. Kingston: Government of Jamaica, 2008.
- Griffith, I. L. "Narcotics Arms Trafficking, Corruption and Governance in the Caribbean." *Journal of Money Laundering Control* 1, no. 2 (1997): 138–147.
- Harriott, A. "Narcotics Arms Trafficking, Corruption and Governance in the Caribbean." In *Understanding Crime in Jamaica: New Challenges for Public Policy*, edited by Anthony, Harriott, 1–12. Kingston: University of the West Indies Press, 2004.
- Harriott, A., and M. Jones. *Crime and Violence in Jamaica*. Washington, DC: Inter-American Development Bank, 2016.
- Hassanli, K. "CARICOM and the Blue Economy – Multiple Understandings and Their Implications for Global Engagement." *Marine Policy* 120, no. October (2020): 104–137.
- Hauck, M. "Rethinking Small-Scale Fisheries Compliance." *Marine Policy* 32, no. 4 (2008): 635–642.
- Havocscope. "Havocscope Black Market." Accessed October 21, 2020. <http://havocscope.com/>.
- Interpol. *Modus Operandi: Human Trafficking and Modern Slavery in the Fisheries Sector*. Interpol, 2017.
- JDF (Jamaica Defence Force). Operations Department. Kingston: Jamaica Defence Force Coast Guard, 2018.
- JIS (Jamaica Information Service). *Jamaica Commissions 2 Offshore Patrol Vessels*. Kingston: Jamaica Information Service, 2017.
- Johnson, H. N., and J. L. Soeters. "Jamaican Dons, Italian Godfathers and the Chances of a 'Reversible Destiny'." *Political Studies* 56, no. 1 (2008): 166–191.
- Jones, E. *Promoting Community-based Climate Resilience in the Fisheries Sector: Environmental and Social Management Framework*. Kingston: Ministry of Industry, Commerce, Agriculture and Fisheries, 2017.
- Kassim, H., and P. Le Gales. "Exploring Governance in a Multi-Level Policy: A Policy Instruments Approach." *West European Politics* 33, no. 1 (2010): 1–21.
- Keast, R., K. Brown, and M. Mandell. "Getting the Right Mix: Unpacking Integration Meanings and Strategies." *International Public Management Journal* 10, no. 1 (2007): 9–33.
- Leslie, G. *Confronting the Don: The Political Economy of Gang Violence in Jamaica*. Geneva: Graduate Institute of International and Development Studies, 2010.
- Liddick, D. 2014. "The Dimensions of a Transnational Crime Problem: The Case of IUU Fishing." *Trends in Organized Crime* 17 (2010): 290–312.
- Lindley, J., and E. J. Techera. "Overcoming Complexity in Illegal, Unregulated and Unreported Fishing to Achieve Effective Regulatory Pluralism." *Marine Policy* 81 (2017): 71–79.
- Linke, S., M. Dreyer, and P. Sellke. "The Regional Advisory Councils: What is Their Potential to Incorporate Stakeholder Knowledge into Fisheries Governance?" *Ambio* 40 (2011): 133–143.

- Lodge, M., D. Anderson, T. Løbach, G. Munro, K. Sainsbury, and A. Willock. *Recommended Best Practices for Regional Fisheries Management Organizations: Report of an Independent Panel to Develop a Model for Improved Governance by Regional Fisheries Management Organizations*. London: Chatham House, 2007.
- Martini, M. *Illegal, Unreported and Unregulated Fishing and Corruption*. Oslo: Transparency International, 2013.
- May, P. J. "Policy Learning and Failure." *Journal of Public Policy* **12**, no. 4 (1992): 331–354.
- McConney, P., T. Phillips, M. Lay, and N. Nembhard. "Organizing for Good Fisheries Governance in the Caribbean Community (CARICOM)." *Social & Legal Studies* **65**, no. 1 (2016): 57–85.
- MICAF (Ministry of Industry, Commerce, Agriculture and Fisheries). *Number of Registered Fishers*. Kingston: Fisheries Division, Ministry of Industry, Commerce, Agriculture & Fisheries, 2018.
- MICAF (Ministry of Industry, Commerce, Agriculture and Fisheries). *Special Fishery Conservation Areas*. Accessed October 26, 2020.
- Moloney, K. "Governing Without Collaboration: State and Civil Society Relations in Jamaica." *International Public Management Review* **14**, no. 1 (2013): 1–26.
- Moloney, K. "Debt Administration in Small Island-States." *Australian Journal of Public Administration* **78**, no. 3 (2019): 325–340.
- Moloney, K. "Post-Busan Partnership in the Pacific? An Analysis of Donor-NGO Relations." *Pacific Review* **33**, no. 2 (2020): 287–304.
- Neil, J-A. "IUU Fishing: A Gateway to Transnational Crime in Jamaica." M.A. diss., World Maritime University, 2018.
- Oanta, G. A. "International Organizations and Deep-Sea Fisheries: Current Status and Future Prospects." *Marine Policy* **87**, no. January (2018): 51–59.
- OSAC (Overseas Advisory Council). *Jamaica 2020 Crime & Safety Report*. Washington, DC: US Department of State, 2020.
- Österblom, H. "Catching Up on Fisheries Crime." *Conservation Biology* **28**, no. 3 (2014): 877–879.
- Palma, M., M. Tsamenyi, and W. Edeson. *Promoting Sustainable Fisheries: The International Legal and Policy Framework to Combat Illegal, Unreported and Unregulated Fishing*. Leiden, The Netherlands: Brill, 2010.
- Peters, B. G. "Policy Instruments and Public Management: Bridging the Gaps." *Journal of Public Administration Research and Theory* **10**, no. 1 (2000): 35–47.
- Petrossian, G. A. "Preventing Illegal, Unreported and Unregulated (IUU) Fishing: A Situational Approach." *Biological Conservation* **189**, no. September (2015a): 39–48.
- Petrossian, G. A., and R. V. Clarke. "Explaining and Controlling Illegal Commercial Fishing." *The British Journal of Criminology* **54**, no. 1 (2014): 73–90.
- Petrossian, G. A., N. Marteache, and J. Viollaz. "Where Do 'Undocumented' Fish Land? An Empirical Assessment of Port Characteristics for IUU Fishing." *European Journal on Criminal Policy and Research* **21**, no. 3 (2015): 337–352.

- Pintassilgo, P., M. Finus, M. Lindroos, and G. Munro. "Stability and Success of Regional Fisheries Management Organizations." *Environmental and Resource Economics* **46**, no. April (2010): 377-402.
- Powell, L., P. Bourne, and L. G. Waller. *Probing Jamaica's Culture: Main Trends in the July-August 2006 Leadership and Governance Survey*. Kingston: University of the West Indies, 2006.
- Rivers, L. III, and C. Gibbs. "Apply a Conservation-Criminology Framework to Common-Pool Natural-Resources Issues." *International Journal of Comparative and Applied Criminal Justice* **35**, no. 4 (2011): 327-346.
- Rudolph, B. A., and S. J. Riley. "Gaining Compliance and Cooperation with Regulated Wildlife Harvest." In *Conservation Criminology*, edited by M. L. Gore, 77-96. Chichester, United Kingdom: John Wiley & Sons, 2017.
- Salamon, L. M. "The New Governance and the Tools of Public Action: An Introduction." *Fordham Urban Law Journal* **28**, no. 5 (2011): 1611-1674.
- Sander, K., J. Lee, V. Hickey, V. Bundi-Mosoti, J. Virdin, and W. B. Magrath. "Conceptualizing Maritime Environmental and Natural Resources Law Enforcement - The Case of Illegal Fishing." *Environmental Development* **11**, no. July (2014): 112-122.
- Schneider, A., and H. Ingram. "Systemically Pinching Ideas: A Comparative Approach to Policy Design." *Journal of Public Policy* **8**, no. 1 (1988): 61-80.
- Serju, C. *Back to Drawing Board with New Fisheries Act - Shaw*. Kingston, Jamaica: The Gleaner, 2019.
- Stone, D. "Transfer and Translation of Policy." *Policy Studies* **33**, no. 6 (2012): 483-499.
- Stone, D. "Between Policy Failure and Implementation: Bricolage, Experimentalism, and Translation in Policy Transfer." (*in press*).
- Stone, D., and K. Moloney, eds., *Oxford Handbook of Global Policy and Transnational Administration*. Oxford: Oxford University Press, 2019.
- Sumaila, U. R., J. Alder, and H. Keith. "Global Scope and Economics of Illegal Fishing." *Marine Policy* **30**, no. 6 (2006): 696-703.
- Sundström, A., and T. Wyatt. "Corruption and Organized Crime in Conservation." In *Conservation Criminology*, edited by M. L. Gore, 97-113. Chichester, United Kingdom: John Wiley & Sons, 2017.
- Thomann, E., P. Trein, and M. Maggeti. "What's the Problem? Multilevel Governance and Problem-Solving." *European Policy Analysis* **5**, no. 1 (2019): 37-57.
- Trebilcock, M. J., and D. G. Hartle. "The Choice of Governing Instrument." *International Review of Law and Economics* **2**, no. 1 (1982): 29-46.
- UNODC (United Nations Office on Drugs and Crime). *Transnational Organized Crime in the Fishing Industry*. Vienna: United Nations Office on Drugs and Crime, 2011.
- UNODC (United Nations Office on Drugs and Crime). *World Drug Report 2018*. Geneva: United Nations Office on Drugs and Crime, 2018.
- USG (US Government). *International Narcotics Control Strategy Report*. Washington, DC: US Department of State, 2017.

- USG (US Government). 2018 International Narcotics Control Strategy Report. Washington, DC: US Department of State, 2018.
- USG (US Government). International Narcotics Control Strategy Report. Washington, DC: US Department of State, 2019.
- USNIC (US National Intelligence Council). Global Implications of Illegal, Unreported, and Unregulated (IUU) Fishing. Washington, DC: IS National Intelligence Council, 2016.
- Veenendaal, W., and J. Corbett. "Why Small States Offer Important Answers to Large Questions." *Comparative Political Studies* **48**, no. 4 (2015): 527–549.
- Veenendaal, W., and J. Corbett. "Clientelism in Small States: How Smallness Influences Patron-Client Networks in the Caribbean and the Pacific." *Democratization* **27**, no. 1 (2020): 61–80.
- Vrancken, P., E. Witbooi, and J. Glazewski. "Introduction and Overview: Transnational Organised Fisheries Crime." *Marine Policy* **105**, no. July (2019): 116–122.
- Waite, R., E. Cooper, N. Zenny, and L. Burke. *Coastal Capital Jamaica: The Economic Value of Jamaica's Coral Reef-Related Fisheries*. Washington, DC: World Resources Institute, 2011.
- WECAFC (Western Central Atlantic Fishery Commission). First Meeting of the Regional Working Group on Illegal, Unreported and Unregulated (IUU) Fishing. Barbados: Food and Agricultural Organization, 2017a.
- WECAFC (Western Central Atlantic Fishery Commission). WECAFC Data Collection Reference Framework. El Salvador: Sistema de la Integración Centroamericana, 2017b.
- WECAFC (Western Central Atlantic Fishery Commission). *State of Fisheries and Aquaculture in the WECAFC Area*. Miami: Western Central Atlantic Fishery Commission, 2019.
- Witbooi, E. "Governing Global Fisheries: Commons, Community Law and Third-Country Coastal Waters." *Social & Legal Studies* **17**, no. 3 (2008): 369–386.
- Witbooi, E. *Criminality and Resilience: Rocky Point, Jamaica*. Geneva: Global Initiative against Transnational Crime, 2020.
- WorldBank. Inflation, Consumer Prices (Annual %). World Development Indicators Database. Washington DC: World Bank, 2020.
- WTO (World Trade Organization). *Negotiations on Fisheries Subsidies*. World Trade Organization. Accessed October 20, 2020. https://www.wto.org/english/tratop_e/rulesneg_e/fish_e/fish_e.htm.
- Yugorsky, P., and A. Sutton. *Jamaica's Protected Area System Plan, Biodiversity Report, Categorization of Protected Areas in Jamaica*. Kingston: Nature Conservancy in Jamaica, 2004.

Exposure to Family Violence and Bullying Perpetration: An Explanation through the Lens of the General Theory of Crime

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Abstract

While numerous studies of bullying victimization across the world have been conducted, relatively few studies have examined bullying through the lens of the general theory of crime. Using Gottfredson and Hirschi's (1990) low self-control theory, this study analysed data from Trinidad. The total sample size was 1,248 students who had an average age of 10.3 years. The results indicated that exposure to family violence and low self-control had a significant influence on bullying perpetration in schools. Particularly, the mediation effect of low self-control – between exposure to family violence and bullying perpetration – was significant. Overall, the findings in this study strongly supported self-control theory. The results of this study can help guide investigations of bullying perpetration in schools. In addition, the results show possible applications of the theory in Trinidad as well as suggest approaches to prevent and remediate bullying.

Keywords: bullying perpetration; family violence; low self-control; mediation effect; Trinidad.

Introduction

Bullying is regarded as intentional, repetitive aggression among school-aged youth toward victims (Espelage, Rose, and Polanin 2015; Olweus 2001; Smith et al. 2002). It includes not only physical and verbal assaults but also indirect aggression such as isolation, gossiping and spreading rumours. These types of aggression negatively affect victims' physical and mental health (Bonanno and Hymel 2010; Cook et al. 2010; Isaacs, Hodges, and Salmivalli 2008). Using a national crime victimization survey, Robers, Kemp, and Truman (2013) found that 28 per cent of American secondary school students experienced bullying in school. According to the Youth Risk Behavior Survey, almost 20 per cent of the US high school students indicated that they were bullied at school within the survey years (Kann et al. 2016). Another national survey from 2016 showed similar prevalence of bullying in school, finding that 22 per cent of students were bullied at school (Zhang, Musu-Gillette, and Oudekerk 2016). Furthermore, bullying is not only a problem in the United States, but it also exists in a number of countries; and it has been broadly studied across the world (Burger et al. 2015; Lee, Jang, and Shin 2014; Romera, Del Rey, and Ortega 2011). Several studies indicated that bullying became rampant among Trinidadian youth (e.g., World Health Organization [WHO] 2017; Ramdass et al. 2017; Ruprah and Sierra 2014; Seepersad 2014). For instance, 20.8 per cent of students aged 13–17 were bullied within a 1-month period preceding the administration of the 2017 WHO survey in Trinidad and Tobago.

Regarding bullying victimization in schools, numerous studies have examined the outcomes of this form of victimization (Baek, Andreescu, and Rolfe 2019; Bellmore, Chen, and Rischall 2013; Hutzell and Payne 2012; Isaacs et al. 2008; Ousey, Wilcox, and Brummel 2008; Randa and Wilcox 2010, 2012; Robers, Zhang, and Truman 2010). For example, Hutzell and Payne (2012) claimed that students who experienced bullying victimization were more likely to hesitate staying in or around schools than those who did not experience such victimization. Isaac and her colleagues (2008) found that people victimized by peers at school had long-term negative effects that persisted into young adulthood.

On the other hand, few studies have examined bullying perpetration (BP) as a deviant outcome (Moon, Hwang, and McCluskey 2011; Moon and Jang 2014; Patchin and Hindaju 2011). Research about the causes of BP is essential because BP has numerous negative influences on victims (Astor et al. 2002; Barrett, Jennings, and Lynch 2012; Bonanno and Hymel 2010; Cook et al. 2010; Isaacs et al. 2008). In order to determine the predictors

of BP, Gottfredson and Hirschi's (1990) self-control theory may provide a useful theoretical framework (Moon and Alarid 2015). However, a relatively limited number of studies have used this theory to explain bullying in schools (e.g., Chui and Chan 2013, 2015; Endresen and Olweus 2001; Moon, Hwang, and McCluskey 2011; Unnever and Cornell 2003). Moreover, there were no studies examining the aetiology of BP in schools using Trinidad's data.

In contrast, other studies have used Gottfredson and Hirschi's (1990) theory for the aetiology of BP in schools among American (Unnever and Cornell 2003), Korean (Moon, Hwang, and McCluskey. 2011), Macanese (Chui and Chan 2013, 2015), Norwegian (Endresen and Olweus 2001) and Turkish adolescents (Vazsonyi et al. 2017). These studies provide some evidence that the theory is applicable to understanding BP, but it is yet to be determined whether it is applicable in Trinidad and Tobago. Given that bullying is a serious issue among Trinidadian youth (Krug 2002; Ramdass et al. 2017; Ruprah and Sierra 2014), research on bullying in schools in Trinidad is necessary. Given the above, this study intends to examine whether low self-control (LSC) influences BP at school, whether poor parenting (i.e., exposure to family violence [EFV]) has an influence on BP through LSC and whether Gottfredson and Hirschi's (1990) self-control theory can be applied in Trinidad.

Theoretical Background

Gottfredson and Hirschi (1990) proposed the general theory of crime in which LSC is a cause of deviant and criminal behaviour. According to the theory, individuals with low levels of self-control have six characteristics. They are "impulsive, insensitive, physical (as opposed to verbal), risk-taking, short-sighted, and nonverbal" (Gottfredson and Hirschi 1990, 90). Gottfredson and Hirschi (1990) demonstrated that individuals with LSC would be more likely to engage in various types of deviant and criminal behaviours than those with high self-control. Particularly, the authors claimed that self-control is instilled in the individual through effective parenting, which requires parental management, which means that parents monitor the child, recognize deviance when it occurs and effectively address that deviance. Overall, individuals who are impulsive, insensitive, shortsighted and risk-taking are less likely to resist the opportunity to commit crime because they do not foresee the consequences of their actions (Gottfredson and Hirschi 1990).

Using the concept of LSC, many studies have examined various types of deviance and crimes, for example, academic dishonesty (Cochran et al. 1998),

bullying (Moon, Hwang, and McCluskey 2011), digital piracy (Higgins 2005), police misconduct (Donner and Jennings 2014) and underage drinking (Baek and Lee 2020). One meta-analysis (Pratt and Cullen 2000) indicated that Gottfredson and Hirschi's (1990) self-control theory has received much empirical support. In particular, studies have found the significant relationship between LSC and BP (e.g., Cho 2018; Chui and Chan 2013, 2015; Moon and Alarid 2015; Unnever and Cornell 2003). For instance, Unnever and Cornell (2003) concluded that middle-school students with lower self-control were more likely to engage in bullying behaviours than those with higher self-control. Consistent with this finding, Chui and Chan (2015) indicated that self-control was statistically related to bullying behaviours among Macanese adolescents. More specifically, LSC indicators (i.e., risk-seeking behaviour, self-centeredness and volatile temper) was related to a significant increase in bullying behaviour. Moon and Alarid (2015) also found that LSC had a significant increase in all types of bullying (i.e. psychological bullying, physical bullying and general bullying), using data from middle schools in the south-west region of the United States.

Additionally, several studies have found that poor parenting was a predictor of bullying behaviours (e.g., Baek et al. 2019; Baldry 2003; Espelage et al. 2014; Moon, Hwang, and McCluskey 2011). With a sample of 1,059 Italian elementary and middle school students, Baldry (2003) found that violence within the family had a detrimental influence on bullying in school. In other words, bullies in school were more likely to be exposed to inter-parental violence than students who did not engage in bullying behaviours (Baldry 2003). Using longitudinal data from Korea, Moon and his colleagues (2011) combined the association between EFV and bullying behaviour in their study. They found that children who were exposed to higher levels of family conflict were more likely to engage in bullying behaviours (Moon, Hwang, and McCluskey 2011). Espelage and her colleagues (2014) also found that EFV was a crucial cause of BP. Furthermore, the EFC is significantly associated with LSC. In their meta-analysis, Willems et al. (2018) indicated that adolescents exposed to family violence were more likely to have a lower self-control. Other studies have supported this finding (e.g., Baek et al. 2018; Gibbs, Giever, and Higgins 2003; Perrone et al. 2004; Watts and McNulty 2016; Wright and Beaver 2005).

To our knowledge, no study shows all the associations between EFV, LSC and BP. In addition, there are no known studies using Caribbean data that examine this relationship. Overall, this study tests whether Gottfredson and Hirschi's (1990) self-control theory can be applied in

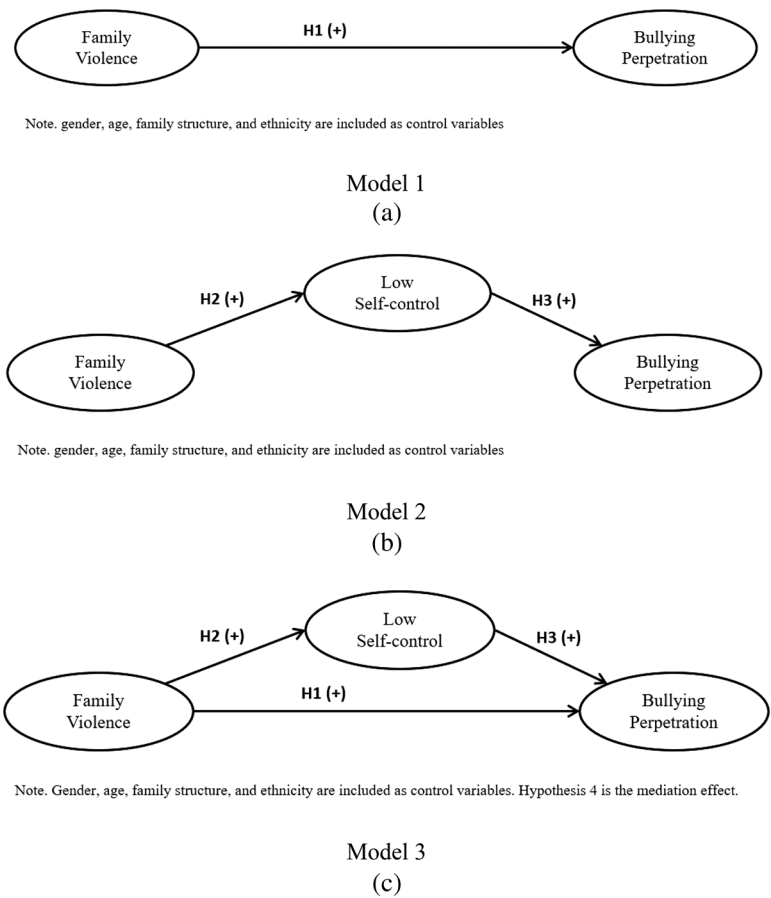


Figure 1: Research Models.

Trinidad. In order to examine each relationship, this study combined three research models (see Figure 1) with four hypotheses:

Hypothesis 1: EFV increases BP.

Hypothesis 2: EFV increases LSC.

Hypothesis 3: LSC increases BP.

Hypothesis 4: EFV increases BP through LSC.

Method

Data

This study used a data set from Trinidad (Seepersad 2014). Data were collected from a sample of 1,248 students from ten elementary schools

in Port of Spain, Trinidad. The response rate of this survey was 76.8 per cent of the total estimated 1,625 students. Once the Ministry of Education, school principals and parents provided consent, trained interviewers distributed the thirteen-page questionnaire in a class setting. The students who participated in the survey ranged in age from 8 to 14 years, with an average age of 10.3 years. The questionnaire collected data in a range of areas including demographic data, bullying victimization, BP, alienation, peer relations, violence at home, self-esteem, depression, anger, academic performance, self-efficacy, self-control and several other variables. Seepersad (2014) reported that 98.4 per cent of the students had experienced one or more forms of bullying or victimization within the last term across all schools in his report. This data combined some characteristics of ethnic and religious diversity (Seepersad 2014). Regarding ethnicity, 5.5 per cent of the sample were East Indian, 28.4 per cent were of African descent, 51.5 per cent were mixed and 11.3 per cent were of other ethnicities. Respondents also had diverse religious backgrounds. Hindus composed 2.2 per cent, Rastafarians 2.3 per cent, Seventh Day Adventists 4.2 per cent, Jehovah Witness 5.7 per cent, Muslims 5.7 per cent, Baptists 11.6 per cent, Pentecostals 17.5 per cent and Catholic 28.9 per cent. Another 17.5 per cent belonged to other religions, while 4.3 per cent did not state their religion.

Measures

Endogenous variable

According to Olweus's (1993) definition, bullying is a kind of intentional, unwanted and repetitive aggression among school-aged youth toward victims, which involves a real or perceived power imbalance. Based on this definition, this study chose six indicators from the data. Survey questions asked respondents, through the section of BP in the questionnaire, whether they engaged in the following acts: "I threaten to hit or hurt other students", "I pick on other students", "In a group I tease other students", "I make other students feel sad on purpose", "I am mean to others when I get angry" and "I damage other students' property". Answers were coded using a 4-point Likert scale, with responses ranging from 1 = never to 4 = very often. When responding to this measure, students were provided with instructions to ensure that the acts recorded were consistent with the features of bullying as identified by Olweus (1993). Higher scores indicated that respondents were engaged in higher levels of BP in school.

Exogenous variable

One exogenous variable was EFV. This was used as an indicator of bad parenting, which was suggested from Gottfredson and Hirschi's (1990) general theory of crime. EFV was measured using 4 items; responses were coded from 1 = "not at all" to 4 = "very often". The indicators of this exogenous variable were "There are many fights in my home", "My parents beat me often", "My parent/s curse me when they are angry at me" and "I see my parents fight at home". Higher scores indicate that the student experienced family violence more frequently in their home.

Mediating variable

As defined by Gottfredson and Hirschi (1990), LSC includes impulsivity, insensitivity, preference for physical (as opposed to verbal) behaviour, risk-taking, shortsightedness and a preference for being nonverbal. This study used four items related to this definition. These items are similar to the Grasmick et al. 's scale (1993). The following items were selected from the data: "I often act without stopping to think" "I like to do dangerous things" "I get angry very easily" and "I do not care if my actions get others upset". The answers were coded from 1 = "strongly disagree" to 4 = "strongly agree".

Control variables

This study also included a number of demographic variables which were used as control variables such as gender, age, family structure and ethnicity. These variables have been found to be related to bullying in a number of studies (e.g. Barboza et al. 2009; Christie-Mizell et al. 2011; Dulmus et al. 2004; Hong et al. 2014; Mercado-Crespo 2013; Lund and Ross 2017; Vitoroulis, Brittain, and Vaillancourt 2016; Yang et al. 2013). For example, Lund and Ross (2017) found that males were more likely to commit BP than females. In addition, Yang and her colleagues (2013) found that BP was related to living with a single parent. Based on the previous findings, the inclusion of such measures as control variables is necessary as it helps to make the statistical models more robust and increases confidence in the findings.

Gender from 1,248 students in this data was dummy coded. Five hundred fifty-three (44.3 per cent) respondents were female (coded as 0) and six hundred ninety-five (55.7 per cent) were male (coded as 1). Respondents were between the ages of 8 and 14. Regarding family structure, this study transformed student's living with someone to a dichotomous measure

(1 = living with both parents and 0 = living with one parent, relatives or others). As seen in the previous section, the ethnicity of students was diverse; in particular, mixed ethnicity was more than half (51.5 per cent) and the next rank was African descent (28.4 per cent). Thus, this study used these two ethnicities as control variables after being dummy coded.

Analysis plan

Using the data from ten elementary schools in Port of Spain, Trinidad (Seepersad 2014), this study conducted data analyses through the following steps. The first step was the descriptive statistics. This step was used to assess the normality of the observed measures and to examine the mean, standard deviation, skewness and kurtosis. This study used Kline's (2016) thresholds for normality with skewness of less than 3 and kurtosis of less than 10. The second step involved the use of bivariate statistics assessing whether the variables shared suitable levels of variation. Next, confirmatory factor analysis (CFA) was conducted to examine the measurement qualities, showing discriminate and convergent validity, composite reliability and proper fits between the model and the data. If factor loadings were higher than .50, the observed variables were considered to statistically significantly account for the latent variables (Kline 2016). In addition, the composite reliability was included in order to assess the consistency of the observed measures in respective latent variables (Bagozzi and Yi 1988; higher than .60). The final step was analyses of the structural model (SM), which were used to test the hypotheses in this study. This study used Mplus 6.0 to analyse the data set.

Furthermore, this study used several criteria with chi-square (χ^2) statistics, comparative fit indices (CFIs), root mean squared error of approximation (RMSEA) and weighted root mean square residual (WRMR). First, χ^2 indicates rejection of the hypothesis by defining whether the goodness of fit is significant. However, χ^2 is not the only criteria for goodness of fit because it is sensitive to sample size (Kline 2016). Although χ^2 should not be significant for properly fitting models, large samples would make it significant. Thus, CFI, RMSEA and WRMR were necessary to determine whether the CFA and SM fit the data. For the goodness of fit, this study used Hu and Bentler's (1999) and Kline's (2016) thresholds. If CFIs are higher than .95, the goodness of fit is deemed excellent. The goodness of fit is very good if the RMSEA is lower than .05. Particularly, this study used WRMR instead of standardized root mean of the residual (SRMR). The WRMR is one form of weighted least squares

(WLS) estimation, which should be used to analyse categorical variables (Muthén and Muthén 2002). The SRMR should be .05 or less (Hu and Bentler 1999). However, this study used WRMR, one form of WLS estimation, instead of SRMR. WLS estimation is used to analyse categorical variables. If WRMR is close to 1.00, it is considered adequate.

Results

Descriptive and bivariate statistics

Descriptive statistical analyses were conducted in order to determine the normality of the observed measures. Table 1 provides information about the distribution of the data, including the mean, standard deviation, skewness and kurtosis. Results indicated that there were no problems of normality of observed measures based on Kline's (2016) thresholds (skewness -3 to 3 and kurtosis -7 to 7). In addition, Table 1 included the second step of the results, the performance of the correlation analysis, which was used to identify the relationships between observed measures and to indicate how much variance was shared between them. Unlike control variables (gender, age, family structure [FS], African [AF] and mixed ethnicity [MIX]), most variables (except for two correlations [EFV2 and LSC1] and [EFV4 and LSC3]) shared suitable levels of variation. In particular, all observed variables of BP (BP1–BP6) were positively and significantly related to observed measures of other latent variables (EFV1 to EFV4 and LSC1 to LSC4, $r = .08-.28$) as well as observed measures within themselves (BP1–BP6, $r = .35-.49$). Overall, since the observed measures among crucial latent variables (BP, EFV and LSC) did not share too much variation, there were no potential problems of multi-collinearity.

CFA

In order to determine whether factor loadings were significant, and whether the measurement model fit the data satisfactorily, CFA was performed. Table 2 shows the quality of fourteen observed measures and three latent variables with the results of CFA. Although the χ^2 was statistically significant ($\chi^2 = 176.27$, $df = 74$, $p < .01$), other fit statistics indicated that the model fit of this measurement model was excellent (CFI = .98, RMSEA = .03 and WRMR = .91). In particular, the factor loadings of observed measures were all statistically significant ($\lambda > .50$). That is, this measurement model had proper levels of convergent and discriminant validity. In addition, all of the latent variables' composite

Table 1: Descriptive and Bivariate Statistics of Observed Variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. BP1																			
2. BP2	.44**																		
3. BP3	.44**	.48**																	
4. BP4	.39**	.45**	.49**																
5. BP5	.43**	.39**	.44**	.45**															
6. BP6	.39**	.43**	.43**	.43**	.35**														
7. EFV1	.17**	.21**	.17**	.18**	.21**	.16**													
8. EFV2	.10**	.16**	.14**	.19**	.15**	.15**	.28**												
9. EFV3	.22**	.17**	.17**	.13**	.22**	.15**	.30**	.35**											
10. EFV4	.13**	.14**	.14**	.14**	.14**	.19**	.35**	.24**	.25**										
11. LSC1	.15**	.11**	.16**	.12**	.15**	.08**	.07*	.04	.10**	.08**									
12. LSC2	.27**	.19**	.25**	.23**	.28**	.23**	.22**	.09**	.20**	.11**	.27**								
13. LSC3	.19**	.08**	.13**	.12**	.24**	.10**	.12**	.10**	.14**	.05	.24**	.30**							
14. LSC4	.25**	.16**	.22**	.24**	.25**	.23**	.13**	.09**	.12**	.07*	.23**	.30**	.30**						
15. Gender	.23**	.14**	.14**	.14**	.17**	.17**	.04	.09**	.10**	.06*	.06*	.20**	-.02	.07*					
16. Age	.09**	.04	-.001	-.03	.002	-.06*	-.11**	-.16**	-.01	-.13**	.06*	.04	.10**	.09**	.001				
17. FS	-.06*	-.04	-.04	-.02	-.05	-.04	-.07*	-.03	-.07*	.02	-.02	-.04	-.07*	-.06	.06*	-.07*			

18. AF	.05	.02	-.01	.01	.00	-.01	-.06*	-.03	-.02	.00	-.05	-.03	.01	-.02	.03	.04	.05	
19. MIX	-.01	.04	.02	-.01	.03	-.04	.05	.03	.03	-.01	.05	.02	.02	.01	-.03	.04	-.07*	-.69**
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Mean	1.66	1.49	1.51	1.45	1.90	1.32	1.77	1.69	1.76	1.43	2.42	2.17	2.72	2.15	.56	10.30	.35	.29
SD	.86	.75	.80	.76	.97	.73	1.04	.90	1.04	.80	1.02	1.14	1.08	1.06		1.40		.53
Range	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	0-1	8-14	0-1	0-1
Skewness	1.37	1.66	1.74	1.84	.94	2.49	1.14	1.34	1.20	2.02	-.03	.44	-.27	.46		.24		
Kurtosis	1.34	2.52	2.57	2.87	-.06	5.64	-.04	1.02	.12	3.39	-1.16	-1.25	-1.21	-1.21		-.62		

Note N=1248, *p<.05, **p<.01, BP=Bullying Perpetration, EFV=Exposure to Family Violence, LSC=Low Self-Control, FS=Family Structure, AF=Ethnicity (African), MIX=Ethnicity (Mixed)

Table 2: Measurement model.

Latent Variable		Observed Variable	λ	α
Bullying Perpetration (BP)	BP1	I threaten to hit or hurt other students	.65**	.82
	BP2	In a group I tease other students	.64**	
	BP3	I pick on other students	.64**	
	BP4	I make other students feel sad on purpose	.70**	
	BP5	I am mean to others when I get angry	.66**	
	BP6	I damage other students' property	.65**	
Exposure to Family Violence (EFV)	EFV1	There are many fights in my home	.65**	.70
	EFV2	My parents beat me often	.57**	
	EFV3	My parent/s curse me when they are angry at me	.64**	
	EFV4	I see my parents fight at home	.58**	
Low Self-Control (LSC)	LSC1	I often act without stopping to think	.52**	.72
	LSC2	I like to do dangerous things	.71**	
	LSC3	I get angry very easily	.61**	
	LSC4	I do not care if my actions get others upset	.65**	
χ^2 / df	CFI	RMSEA	WRMR	
176.27**/74	.98	.03	.91	

Note. * $p < .05$, ** $p < .01$, λ =factor loading, α =Composite Reliability

reliability were greater than .70 (BP = .82, EFV = .70 and LSC = .72), meeting Bagozzi and Yi's (1988) threshold (higher than .60). Thus, all observed measures were statistically reliable to their respective latent variables.

SM

As the last step of analyses, this study conducted three SMs to confirm four hypotheses – the direct effect of EFV on BP (Model 1), the effect

Table 3: Results of structural models.

Measures	Model 1 (Figure 1_a)		Model 2 (Figure 1_b)		Model 3 (Figure 1_c)	
	Coef. (SE)	β	Coef. (SE)	β	Coef. (SE)	β
EFV → BP	.49 (.04)	.48**			.31 (.04)	.30**
EFV → LSC			.45 (.04)	.63**	.36 (.04)	.44**
LSC → BP			.84 (.07)	.58**	.51 (.06)	.40**
Gender → BP	.31 (.05)	.24**	.25 (.05)	.19**	.27 (.04)	.21**
Age → BP	.01 (.02)	.03	-.02 (.02)	-.04	-.01 (.02)	-.01
FS → BP	-.11 (.05)	-.08	-.05 (.05)	-.03	-.09 (.04)	-.05
AF → BP	.10 (.06)	.07	.04 (.06)	.03	.07 (.06)	.05
MIX → BP	.09 (.06)	.07	.04 (.06)	.03	.06 (.05)	.05
Gender → LSC			.08 (.04)	.08*	.07 (.04)	.07*
Age → LSC			.04 (.01)	.11**	.04 (.01)	.10**
FS → LSC			-.07 (.04)	-.07	-.07 (.04)	-.07
AF → LSC			.06 (.05)	.06	.06 (.05)	.05
MIX → LSC			.05 (.05)	.05	.05 (.05)	.05
χ^2 / df	223.26**/79		480.38**/135		350.48**/134	
CFI	.97		.94		.97	
RMSEA	.04		.05		.04	
WRMR	1.17		1.35		1.13	

Note. * $p < .05$, ** $p < .01$, BP=Bullying Perpetration, EFV=Exposure to Family Violence, LSC=Low Self-Control, FS=Family Structure, AF=Ethnicity (African), MIX=Ethnicity (Mixed)

of EFV on BP through LSC (Model 2) and the indirect effect of LSC between EFV and BP (Model 3). Results are presented in Table 3. Results of fit statistics in Model 1 demonstrated excellent goodness of fit ($\chi^2 = 223.26$, $df = 79$, $p < .01$, CFI = .97, RMSEA = .04 and WRMR = 1.17). In this model, in spite of including several control variables (gender, age, family structure and ethnicity), EFV significantly increased BP (Hypothesis 1: $\beta = .48$, $p < .01$). Thus, when students were exposed to greater levels of family violence, they were more likely to engage in BP. Regarding control variables, only gender had a significant influence on BP in this model ($\beta = .24$, $p < .01$). That is, male students exhibited a higher level of BP compared to female students.

Hypotheses 2 and 3 were tested in Model 2. Before confirming those hypotheses, we examined the fit between the model and the data.

Table 4: Direct/ Indirect and Total Standardized Effects of Variables.

Model 3 (Figure 1_c)	I.V.	M.V.	D.V.	Direct	Indirect	Total Effect
	EFV	LSC	BP	.30**	.18**	.48**

Note. I.V. = Independent Variable, M.V. = Mediating Variable, D.V. = Dependent Variable, BP = Bullying Perpetration, EFV = Exposure to Family Violence, LSC = Low Self-Control

Unlike Model 1, model fits were not excellent ($\chi^2 = 480.38$, $df = 135$, $p < .01$, $CFI = .94$, $RMSEA = .05$ and $WRMR = 1.35$); these fit statistics, however, were acceptable.¹ With the proper fit between the model and the data, all hypotheses in this model were statistically significant, EFV significantly increased LSC (Hypothesis 2: $\beta = .63$, $p < .01$) and LSC significantly increased BP (Hypothesis 3: $\beta = .58$, $p < .01$). Overall, the EFV as an indicator of poor parenting negatively impacted students' self-control. Then these students with lower self-control became more likely to engage in BP than those with higher self-control.

Lastly, Model 3 combined all hypotheses in this study (Hypotheses 1–4) for testing the mediation effect of LSC. This study found that each of model fit statistics indicated excellent fit between the model and the data ($\chi^2 = 350.48$, $df = 134$, $p < .01$, $CFI = .97$, $RMSEA = .04$ and $WRMR = 1.13$). That is, when including the direct effect of EFV in Model 2, fit statistics were excellent in Model 3 (compare to Model 2: $\Delta\chi^2 = -129.9$, $\Delta CFI = .03$ and $\Delta RMSEA = -.01$; as well as $WRMR$ close to 1.0).² Since the goodness of fit of Model 3 was verified, the hypotheses could be examined with the path coefficients in this research model. Even though several control variables were combined in Model 3, all path coefficients were statistically significant; EFV significantly increased BP (Hypothesis 1: $\beta = .30$, $p < .01$), EFV significantly increased LSC (Hypothesis 2: $\beta = .44$, $p < .01$) and LSC significantly increased BP (Hypothesis 3: $\beta = .40$, $p < .01$). In addition, EFV significantly increased BP through LSC (Hypothesis 4: indirect effect of LSC = .18, $p < .01$; see Table 4). Eventually, poor parenting (i.e. EFV) had a significant influence on LSC and BP. Furthermore, LSC was a key mediator between EFV and BP.

¹If CFI is higher than .90, the goodness of fit is deemed good, but CFI above .95 is excellent (Kline, 2016). The goodness of fit is very good if the RMSEA is lower than .05, good if it is .05–.08 and not good if it is higher than .10 (Hu & Bentler, 1999).

²Cheung and Rensvold (2002) proposed the .01 cutoff point of ΔCFI and $\Delta RMSEA$ values. That is, more than .01 change will be significant.

Discussion

While numerous studies have identified bullying's negative outcomes (Bonanno and Hymel 2010; Cook et al. 2010; Hutzell and Payne 2012; Isaacs et al. 2008), bullying in schools continues to be a problem across the world (Burger et al. 2015; Kann et al. 2016; Lee et al. 2014; Robers, Kemp, and Truman 2013; Romera, Del Rey, and Ortega 2011; Seepersad 2014). In order to provide useful prevention strategies, many researchers have examined the causes of bullying in schools through various theoretical orientations (Astor et al. 2002; Baek et al. 2019; Barrett et al. 2012; Bonanno and Hymel 2010; Cook et al. 2010; Isaacs et al. 2008; Jeong and Lee 2013; Moon and Jang 2014; Patchin and Hindaju 2011). However, although Gottfredson and Hirschi's (1990) self-control theory provides a useful theoretical framework to explain one possible cause of bullying (Moon and Alarid 2015), a relatively limited number of studies have used this theory to explain BP in schools (e.g. Chui and Chan 2013, 2015; Endresen and Olweus 2001; Moon, Hwang, and McCluskey 2011; Unnever and Cornell 2003). In particular, research has rarely examined the causality of BP with poor parenting and LSC; moreover, there is no empirical study using Caribbean data. To address these issues, this study tested four hypotheses based on Gottfredson and Hirschi's (1990) self-control theory using data from ten elementary schools in Port of Spain, Trinidad. All four hypotheses were tested and found to be consistent with self-control theory. There were three main findings related to family violence, LSC and BP.

First of all, this study found that LSC was a main predictor of BP in schools. Gottfredson and Hirschi (1990) demonstrated that individuals with LSC would be more likely to engage in various types of deviant and criminal behaviours than those with high self-control. Consistent with the results of previous studies (Pratt and Cullen 2000), LSC significantly increased BP in schools in Trinidad. The finding is consistent with previous studies of adolescents from across the world, for example, those who have used Macanese (Chui and Chan 2013, 2015), Norwegian (Endresen and Olweus 2001), Korean (Moon, Hwang, and McCluskey 2011) and American (Unnever and Cornell 2003) samples. These studies support the claim that Gottfredson and Hirschi's (1990) self-control theory provides a useful theoretical framework to explain the cause of BP in schools (Moon and Alarid 2015). Like those studies, the current study strongly supports Gottfredson and Hirschi's (1990) theory for the aetiology of BP in schools.

Second, this study showed that the EFV was a cause of LSC and BP. As shown in Willems and colleagues' (2018) meta-analysis, adolescents

had lower self-control when they were exposed to family violence. On the other hand, a few studies found different results that witnessing domestic violence (i.e. bad parenting) was not related to self-control directly (Payne, Triplett, and Higgins 2011; Payne, Higgins, and Blackwell 2010). These findings may be because these studies measured childhood experiences in adulthood. Moreover, those studies offered reasons why bad parenting did not influence LSC; for instance, self-control theory itself might not be enough to explain this relationship (for example see Payne et al. 2011). Despite this, several studies have demonstrated that LSC can be developed through effective parenting (e.g., Gibbs et al. 2003; Perrone et al. 2004; Watts and McNulty 2016). This study also showed that ineffective parenting (i.e., EFV) was significantly linked to LSC.

In addition, the results in this study were consistent with the findings from previous studies, indicating that ineffective parenting (e.g., exposed to violence at home) had an influence on bullying in school (Baek et al. 2019; Baldry 2003; Espelage et al. 2014; Moon, Hwang, and McCluskey 2011). For example, Baldry (2003) found, using a sample of Italian children, that living with violent parents increased the likelihood of engaging in bullying. Espelage and associates (2014) concluded that exposure to familial violence was a precursor to aggressive behaviours in school (i.e., fighting and BP) as well as subsequent problem behaviours (e.g., substance use) among American middle school students. As such, parental behaviours have a significant influence on bullying in school. Consistent with this finding, Model 2 in this study, which excluded the direct effect of EFV, had a lower goodness of fit than other models with the effect (Models 1 and 3). That is, it is necessary to include inter-parental violence to predict school bullying in Trinidad and Tobago.

Finally, this study found that LSC functioned as a mediator between EFV and BP (see Table 4). Thus, ineffective parenting had not only the direct impact on bullying behaviours in school, but it also indirectly impacted bullying in school through LSC. This finding strongly supports Gottfredson and Hirschi's (1990) theory, which argues that self-control is instilled in the individual through effective parenting. This requires parental management, meaning parents monitor the child, recognize deviance when it occurs and effectively address deviance.

Conclusion

Despite these meaningful findings, this study has several limitations. First, the use of family violence as an indicator of parental management can be

challenged as it applies to Gottfredson and Hirschi's (1990) theory. Parental management requires direct control of the parent as they monitor the child, recognize deviance when it occurs and effectively address that deviance (Gottfredson and Hirschi 1990). However, effective parenting may not be limited to those actions. As such, a variety of parenting types may be necessary in order to properly assess this theory. Another limitation is data itself. Due to the cross-sectional nature of the data (i.e., unclear time-order), temporal effects could not be assessed. Although this study followed the theoretical framework of Gottfredson and Hirschi's (1990) theory, longitudinal data are required to test the causality of BP. Lastly, the data are not representative of all students in Trinidad because the survey only targeted schools in one part of the country.

Despite the above, this study strongly supports Gottfredson and Hirschi's (1990) theory. LSC, the main concept of the theory, was a strong predictor of BP in all models of this study. Particularly, this study found that LSC worked as a mediator between EFV and BP in schools. In other word, bullying in school is not only the school's matter but also a family issue. Parental support is needed to solve bullying in schools. In closing, the results of this study can help guide interventions for BP in schools. More specifically, the findings suggest intervention approaches to prevent and remediate bullying (e.g., development of prevention programs focusing on students with LSC or family violence). In addition, the results show the utility of the general theory of crime (Gottfredson and Hirschi 1990) in Trinidad.

References

- Astor, R. A., R. Benbenishty, A. Zeira, and A. Vinokur. "School Climate, Observed Risky Behaviors, and Victimization as Predictors of High School Students' Fear and Judgements of School Violence as a Problem." *Health Education & Behavior* **29** (2002): 716-736.
- Baek, H., V. Andreescu, and S. M. Rolfe. "Bullying and Fear of Victimization: Do Supportive Adults in School Make a Difference in Adolescents' Perceptions of Safety?" *Journal of School Violence* **18**, no. 1 (2019): 92-106.
- Baek, H., and S. Lee. "Underage Drinking in America: An Explanation through the Lens of the General Theory of Crime." *Deviant Behavior* **41**, no. 1 (2018): 1-12.
- Baek, H., J. A. Nicholson, G. E. Higgins, and M. M., Losavio. "Parental Indifference and Children's Digital Piracy in South Korea: Mediation Effects of Low Self-Control and Misconception." *Asian Journal of Criminology* **13**, no. 4 (2018): 293-309.

- Baek, H., A. M. Roberts, R. Seepersad, and K. Swartz. "Examining Negative Emotions as Mediators between Exposures to Family Violence and Bullying: A Gendered Perspective." *Journal of School Violence* **18**, no. 3 (2018): 1-15.
- Bagozzi, R. P., and Y. Yi. "On the Evaluation of Structural Equation Models." *Journal of the Academy of Marketing Science* **16**, no. 1 (1988): 74-94.
- Baldry, A. C. "Bullying in Schools and Exposure to Domestic Violence." *Child abuse & Neglect* **27**, no. 7 (2003): 713-732.
- Barboza, G. E., L. B. Schiamberg, J. Oehmke, S. J. Korzeniewski, L. A. Post, and C. G., Heraux. "Individual Characteristics and the Multiple Contexts of Adolescent Bullying: An Ecological Perspective." *Journal of Youth and Adolescence* **38**, no. 1 (2009): 101-121.
- Barrett, K. L., W. G. Jennings, and M. J. Lynch. "The Relation between Youth Fear and Avoidance of Crime in School and Academic Experiences." *Journal of School Violence* **11** (2012): 1-20.
- Bellmore, A., W. T. Chen, and E. Rischall. "The Reasons Behind Early Adolescents' Responses to Peer Victimization." *Journal of Youth and Adolescence* **42** (2013): 275-284.
- Bonanno, R., and S. Hymel. "Beyond Hurt Feelings: Investigating Why Some Victims of Bullying are at Greater Risk for Suicidal Ideation." *Merrill-Palmer Quarterly* **56** (2010): 420-442.
- Burger, C., D. Strohmeier, N. Spröber, S. Bauman, and K. Rigby. "How Teachers Respond to School Bullying: An Examination of Self-Reported Intervention Strategy Use, Moderator Effects, and Concurrent Use of Multiple Strategies." *Teaching and Teacher Education* **51** (2015): 191-202.
- Cheung, G. W., and R. B. Rensvold. "Evaluating Goodness-of-Fit Indexes for Testing Measurement Invariance." *Structural Equation Modeling* **9** (2002): 233-255.
- Cho, S. "The Impact of Low Self-Control and Delinquent Peer Associations on Bullying Perpetration and Victimization among South Korean Adolescents: Time-Concurrent, Time-Lagged, and Latent Growth Curve Modeling." *Journal of School Violence* **17**, no. 4 (2018): 500-520.
- Christie-Mizell, C. A., J. M. Keil, M. T. Laske, and J. Stewart. "Bullying Behavior, Parents' Work Hours and Early Adolescents' Perceptions of Time Spent with Parents." *Youth & Society* **43**, no. 4 (2011): 1570-1595.
- Chui, W. H., and H. C. O. Chan. "Association between Self-Control and School Bullying Behaviors among Macanese Adolescents." *Child Abuse & Neglect* **37** (2013): 237-242.
- Chui, W. H., and H. C. O. Chan. "Self-Control, School Bullying Perpetration, and Victimization among Macanese Adolescents." *Journal of Child and Family Studies* **24**, no. 6 (2015): 1751-1761.
- Cochran, J. K., P. B. Wood, C. S. Sellers, W. Wilkerson, and M. B. Chamlin. "Academic Dishonesty and Low Self-Control: An Empirical

- Test of a General Theory of Crime." *Deviant Behavior* **19** (1998): 227-255.
- Cook, C. R., K. R. Williams, N. G. Guerra, T. E. Kim, and S. Sadek. "Predictors of Bullying and Victimization in Childhood and Adolescence: A Meta-Analytic Investigation." *School Psychology Quarterly* **25** (2010): 65-83.
- Dawson, J. F. "Moderation in Management Research: What, Why, When, and How." *Journal of Business and Psychology* **29**, no. 1 (2014): 1-19.
- Dawson, J. F., and A. W. Richter. "Probing Three-Way Interactions in Moderated Multiple Regression: Development and Application of a Slope Difference Test." *Journal of Applied Psychology* **91**, no. 4 (2006): 917.
- Donner, C. M., and W. G. Jennings. "Low Self-Control and Police Deviance: Applying Gottfredson and Hirschi's General Theory to Officer Misconduct." *Police Quarterly* **17** (2014): 203-225.
- Dulmus, C. N., M. T. Theriot, K. M. Sowers, and J. A. Blackburn. "Student Reports of Peer Bullying Victimization in a Rural School." *Stress, Trauma, and Crisis* **7**, no. 1 (2004): 1-16.
- Endresen, I. M., and D. Olweus. "Self-Reported Empathy in Norwegian Adolescents: Sex Differences, Age Trends, and Relationship to Bullying." In *Constructive & Destructive Behavior: Implications for Family, School, and Society*, edited by A. C. Bohart, C. Arthur, and D. J. Stipek, 147-165. Washington, DC: American Psychological Association, 2001.
- Espelage, D. L., S. Low, M. A. Rao, J. S. Hong, and T. D. Little. "Family Violence, Bullying, Fighting, and Substance Use among Adolescents: A Longitudinal Mediation Model." *Journal of Research on Adolescence* **24**, no. 2 (2014): 337-349.
- Espelage, D. L., C. A. Rose, and J. R. Polanin. "Social-Emotional Learning Program to Reduce Bullying, Fighting, and Victimization among Middle School Students with Disabilities." *Remedial and Special Education* **36**, no. 5 (2015): 299-311.
- Gibbs, J. J., D. Giever, and G. E. Higgins. "A Test of Gottfredson and Hirschi's General Theory Using Structural Equation Modeling." *Criminal Justice and Behavior* **30**, no. 4 (2003): 441-458.
- Gottfredson, M., and T. Hirschi. *A General Theory of Crime*. Stanford, CA: Stanford University Press, 1990.
- Grasmick, H. G., C. R. Tittle, R. J. Bursik, and B. J. Arneklev. "Testing the Core Empirical Implications of Gottfredson and Hirschi's General Theory of Crime." *Journal of Research on Crime and Delinquency* **30** (1993): 5-29.
- Gravetter, F. J., and L. B. Wallnau. *Essentials of Statistics for the Behavioral Sciences* (8th ed.). Belmont, CA: Wadsworth, 2014.
- Higgins, G. E. "Can Low Self-Control Help Understand the Software Piracy Problem?" *Deviant Behavior* **26**, no. 1 (2005): 1-24.
- Hong, J. S., A. A. Peguero, S. Choi, D. Lanesskog, D. L. Espelage, and N. Y. Lee. "Social Ecology of Bullying and Peer Victimization of Latino and Asian Youth

- in the United States: A Review of the Literature." *Journal of School Violence* **13**, no. 3 (2014): 315–338.
- Hu, L. T., and P. M. Bentler. "Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives." *Structural Equation Modeling: A Multidisciplinary Journal* **6**, no. 1 (1999): 1–55.
- Hutzell, K. L., and A. A. Payne. "The Impact of Bullying Victimization on School Avoidance." *Youth Violence and Juvenile Justice* **10**, no. 4 (2012): 370–385.
- Isaacs, J., E. V. E. Hodges, and C. Salmivalli. "Long-Term Consequences of Victimization by Peers: A Follow-up from Adolescence to Young Adulthood." *European Journal of Developmental Science* **2** (2008): 387–397.
- Jeong, S., and B. H. Lee. "A Multilevel Examination of Peer Victimization and Bullying Preventions in Schools." *Journal of Criminology* **2013** (2013): 1–10.
- Kann, L., T. McManus, W. A. Harris, S. L. Shanklin, K. H. Flint, J. Hawkins, . . . S. Zaza. "Youth Risk Behavior Surveillance—United States, 2015." *Morbidity and Mortality Weekly Report* **65**, no. 6 (2016): 1–174.
- Kline, R. B. *Principles and Practice of Structural Equation Modeling* (4th ed.). New York, NY: The Guilford Press, 2016.
- Krug, E. G. *World Report on Violence and Health*, 2002.
- LaGrange, T. C., and R. A. Silverman. "Low Self-Control and Opportunity: Testing the General Theory of Crime as an Explanation for Gender Differences in Delinquency." *Criminology* **37** (1999): 41–72.
- Lee, Y., H. Jang, and S. Shin. "Analysis of Panel Data about Bullying: Comparison of Four Groups; Bullying Group, Victimized Group, Overlapped Group, Uninvolved Group." *Korean Criminology* **8** (2014): 67–100.
- Longshore, D., S. Turner, and J. Stein. "Self-Control in a Criminal Sample: An Examination of Construct Validity." *Criminology* **34** (1996): 209–228.
- Lund, E. M., and S. W. Ross. "Bullying Perpetration, Victimization, and Demographic Differences in College Students: A Review of the Literature." *Trauma, Violence, & Abuse* **18**, no. 3 (2017): 348–360.
- Mercado-Crespo, M. C. *The Role of Connectedness and Religious Factors on Bullying Participation among Preadolescents in Puerto Rico*, 2013.
- Moon, B., and L. F. Alarid. "School Bullying, Low Self-Control, and Opportunity." *Journal of Interpersonal Violence* **30**, no. 5 (2015): 839–856.
- Moon, B., H-W. Hwang, and J. D. McCluskey. "Causes of School Bullying: Empirical Test of a General Theory of Crime, Differential Association Theory, and General Strain Theory." *Crime & Delinquency* **57**, no. 6 (2011): 849–877.
- Moon, B., and S. J. Jang. "A General Strain Approach to Psychological and Physical Bullying: A Study of Interpersonal Aggression at School." *Journal of Interpersonal Violence* **29**, no. 12 (2014): 2147–2171.

- Morris, R. G., and G. E. Higgins. "Neutralizing Potential and Self-Reported Digital Piracy: A Multi-Theoretical Exploration among Ccollege Undergraduates." *Criminal Justice Review* 34 (2009): 173-195.
- Muthén, L. K., and B. O. Muthén. "How to Use a Monte Carlo Study to Decide on Sample Size and Determine Power." *Structural Equation Modeling* 9 (2002): 599-620.
- O'Brien, R. M. "A Caution Regarding Rules of Thumb for Variance Inflation Factors." *Quality & Quantity* 41, no. 5 (2007): 673-690.
- Olweus, D. "Peer Harassment: A Critical Analysis and Some Important Issues." In *Peer Harassment in School: The Plight of the Vulnerable and Victimized*, edited by J. Juvonen and S. Graham, 3-20. New York: Guilford, 2001.
- Olweus, D. *Bullying at School: What We Know and What We Can Do*. Cambridge, MA: Blackwell, 1993.
- Ousey, G. C., P. Wilcox, and S. Brummel. "Déjà vu All Over Again: Investigating Temporal Continuity of Adolescent Victimization." *Journal of Quantitative Criminology* 24 (2008): 307-335.
- Patchin, J. W., and S. Hinduja. "Traditional and Nontraditional Bullying among Youth: A Test of General Strain Theory." *Youth & Society* 43, no. 2 (2011): 727-751.
- Payne, B. K., G. E. Higgins, and B. Blackwell. "Exploring the Link between Self-Control and Partner Violence: Bad Parenting or General Criminals." *Journal of Criminal Justice* 38, no. 5 (2010): 1015-1021.
- Payne, B. K., R. A. Triplett, and G. A. Higgins. "The Relationship between Self-Control, Witnessing Domestic Violence, and Subsequent Violence." *Deviant behavior* 32, no. 9 (2011): 769-789.
- Perrone, D., C. J. Sullivan, T. C. Pratt, and S. Margaryan. "Parental Efficacy, Self-Control, and Delinquency: A Test of a General Theory of Crime on a Nationally Representative Sample of Youth." *International Journal of Offender Therapy and Comparative Criminology* 48, no. 3 (2004): 298-312.
- Pratt, T. C., and F. Cullen. "The Empirical Status of Gottfredson and Hirschi's General Theory of Crime: A Meta-Analysis." *Criminology* 38 (2000): 931-964.
- Ramdass, M., R. Birbal, C. Harripaul, and G. Alleyne. "Addressing Bullying in Schools: A Study of Selected Primary Schools in Trinidad and Tobago." *Educational Research Applications* 1 (2017): 1-7.
- Randa, R., and P. Wilcox. "School Disorder, Victimization, and General v. Place-Specific Student Avoidance." *Journal of Criminal Justice* 38 (2010): 854-861.
- Robers, S., J. Kemp, and J. Truman. *Indicators of School Crime and Safety: 2012* (NCES 2013-036/NCJ 241446). Washington, DC: National Center for Education Statistics, U.S. Department of Education; Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice, 2013.

- Robers, S., J. Zhang, and J. Truman. Indicators of School Crime and Safety: 2010 (NCES 2011-002/NCJ 230812). Washington, DC: National Center for Education Statistics, U.S. Department of Education, and Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice, 2010.
- Romera, E. M., R. Del Rey, and R. Ortega. "Prevalence and Differentiating Aspects Related to Gender with Regard to the Bullying Phenomenon in Poor Countries." *Psicothema* **23**, no. 4 (2011): 624–629.
- Ruprah, I. J., and R. Sierra. Mothers Are Right: Eat Your Vegetables and Keep Away from The Girls (Boys): Bullying Victimization Profile in the Caribbean. Inter-American Development Bank, 2014. <https://repositorio.minedu.gob.pe/handle/123456789/3396>
- Seepersad, R. Bullying and Victimization in Selected Primary Schools on North Trinidad. Port of Spain, Trinidad and Tobago: Ministry of Education and the Citizen Security Programme, Ministry of National Security, 119, 2014.
- Smith, P. K., H. Cowie, R. F. Olafsson, and A. P. D. Liefhoghe. "Definitions of Bullying: A Comparison of Terms Used, and Age and Gender Differences, in a Fourteen-Country International Comparison." *Child Development* **73**, no. 4 (2002): 1119–1133.
- Unnever, J. D., and D. G. Cornell. "Bullying, Self-Control, and ADHD." *Journal of Interpersonal Violence* **18** (2003): 129–147.
- Vazsonyi, A. T., G. Ksinan Jiskrova, Y. Özdemir, and M. M. Bell. "Bullying and Cyberbullying in Turkish Adolescents: Direct and Indirect Effects of Parenting Processes." *Journal of Cross-Cultural Psychology* **48**, no. 8 (2017): 1153–1171.
- Vitoroulis, I., H. Brittain, and T. Vaillancourt. "School Ethnic Composition and Bullying in Canadian Schools." *International Journal of Behavioral Development* **40**, no. 5 (2016): 431–441.
- Watts, S. J., and T. L. McNulty. "Genes, Parenting, Self-Control, and Criminal Behavior." *International Journal of Offender Therapy and Comparative Criminology* **60**, no. 4 (2016): 469–491.
- Willems, Y., J. B. Li, A. Hendriks, M. Bartels, and C. Finkenauer. "The Relationship between Family Violence and Self-Control in Adolescence: A Multi-Level Meta-Analysis." *International Journal of Environmental Research and Public Health* **15**, no. 11 (2018): 2468.
- World Health Organization. Global school-based student health survey (GSHS), 2017.
- Wright, J. P., and K. M. Beaver. "Do Parents Matter in Creating Self-Control in Their Children? A Genetically Informed Test of Gottfredson and Hirschi's Theory of Low Self-Control." *Criminology* **43**, no. 4 (2005): 1169–1202.
- Yang, S. J., R. Stewart, J. M. Kim, S. W. Kim, I. S. Shin, M. E. Dewey, . . . and J. S. Yoon. "Differences in Predictors of Traditional and Cyber-Bullying: A 2-Year Longitudinal Study in Korean School Children." *European Child & Adolescent Psychiatry* **22**, no. 5 (2013): 309–318.

Zhang, A., L. Musu-Gillette, and B. A. Oudekerk. *Indicators of School Crime and Safety: 2015* (NCES 2016-079/NCJ 249758). Washington, DC: National Center for Education Statistics, U.S. Department of Education; Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice, 2016.

The Status of Youth Incarceration in the Caribbean

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Abstract

While recent advancements in juvenile justice across the Caribbean have occurred, little academic inquiry has examined youth incarceration. Using data from the Caribbean Youth Detention Survey collected in nine nations between 2014 and 2015, we examine descriptive statistics and assess country-level differences in youth incarcerated in the Caribbean.

Many of our study nations have a small number of detained youth. While the average youth detainee is 16 years old, male and of African descent, some are as young as 8 and 10 years. Over a quarter of detainees are awaiting sentencing; however, this total is almost 50 per cent in Trinidad and Tobago and St. Vincent and the Grenadines. While only about a quarter of detained youth have been remanded or sentenced for a violent offence, the majority self-report serious levels of offending prior to incarceration.

Given the relatively small number of youth incarcerated, alternative responses that are highly personalized and empirically identified as effective can be implemented with this sub-population that is at risk of future delinquency.

Keywords: juvenile; youth; Caribbean; incarceration; prison.

Introduction

The Caribbean is one of the most violent regions in the world, with homicide rates in some nations over seven times the rate in the United States (WHO 2015). Youth make up a large portion of populations in many of these developing nations (between 14 and 25 per cent), and juvenile offending contributes to crime rates (Foss et al. 2013). There is an increasing interest in delinquency in the Caribbean, and scholars have advanced work on areas including gang involvement (Katz and Fox 2010; Williams 2013), risk and protective factors (Katz, Maguire, and Choate 2011; Maguire and Fishbein 2016; Maguire, Wells, and Katz 2011; Laurent et al. 2011) and correlates of offending (Gentle-Genitty et al. 2017). However, despite increasing youth violence (UNDP 2012), limited research has explored youth incarceration.

The turn of the century brought an increased focus on rehabilitation for youth in the Caribbean. The majority of countries we focus on in this study have adopted a new juvenile justice statute since 2000. International organizations have also expressed interest in juvenile justice programming. For example, in February 2020, the Organization of American States (OAS) put forth twelve specific recommendations under the overarching goal of the humanization of prison systems. One of these goals calls for a meeting to address the situation of minors deprived of liberty (OAS 2020). Despite interest in juvenile justice reform, a 2011 Caribbean Juvenile Justice Assessment by United States Agency for International Development (USAID) noted that "change is hindered by the high cost of implementation, slow pace of legislative reforms, and an often fragmented approach to the administration of juvenile justice" (Laurent et al. 2011: 1).

Research on penal institutions in the Caribbean has lagged behind studies on other justice systems and crime. However, this trend has started to shift with inquiry on incarcerated individuals and prison systems, though the primary focus has been on adult persons (Leslie 2020; Bailey 2013; Bailey and Coore-Desai 2009; Green 2011; Cooke and Wozniak 2010; Bailey 2020; Seepersad 2020; Sarsfield and Bergman 2017; Bergman et al. 2020). The present study addresses this gap by providing a multi-country picture of incarcerated youth in the Caribbean. We focus on nine nations: Antigua and Barbuda, Barbados, Dominica, Grenada, Guyana, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, and Trinidad and Tobago. Using data from the 2014–15 Caribbean Youth Detention Survey (CYDS), we present descriptive statistics in four areas: (1) the prevalence and location of incarcerated youth,

(2) demographic characteristics of detainees across nations, (3) self-reported delinquency and victimization among youth during 12 months prior to incarceration and (4) the remand status and the offences/convictions that lead to the youth being incarcerated.

This article proceeds as follows. First, we briefly discuss juvenile justice in the region, emphasizing the age of criminal responsibility. Next, we provide an overview of the limited research on incarceration in the Caribbean, followed by the current study's methodological approach. Finally, we present our results, then close with a discussion of the context of our findings and suggestions for policy and research frameworks moving forward.

Juvenile Justice in the Region

Legal systems throughout the English-speaking Caribbean evolved from the British common law tradition, and the Judiciary Committee of the Privy Council in London remains the highest court of appeal in most nations (with the exception of Barbados and Guyana where the Caribbean Court of Appeals issues final judgments) (Rediker 2013). Rules guiding sanctions and detention for juveniles suspected, charged or convicted of criminal activity are generally specified in separate juvenile statutes. These statutes, as compared to guidelines for adults, are typically focused on rehabilitation to ensure youth receive treatment opportunities that will provide benefits upon their exit from the justice system. Six countries of focus in this study passed revised juvenile justice statutes since 2000: Antigua and Barbuda, Barbados, Grenada, Guyana, St. Kitts and Nevis, and St. Lucia.

However, whether reforms in new juvenile justice statutes are implemented into practice is not guaranteed. Several key findings emerged from a 2011 Caribbean Juvenile Justice Assessment by USAID. First, the authors found that most countries do not have dedicated courts for youth and instead consolidate proceedings for youth into 1–2 days a month. They also noted a lack of trained specialists, including child psychologists. Despite this, a few countries operate diversion programs run by police (e.g. some countries also have community-based policing activities involving youth). Diversions in court, however, are not as prevalent. St. Lucia is an exception; during the court process, individual diversion plans are created for youth. Additionally, in Dominica, a non-government organization (NGO) runs From Offending to Achieving, which uses a family intervention strategy to address and treat needs. This program targets

males aged 14–17 who are accused of minor offences or convicted and on probation (Laurent et al. 2011).

Age of criminal responsibility

One key factor for juvenile justice systems is the age of criminal responsibility. Longitudinal research and developmental psychology document how adolescents' maturation process and brain development impact their self-control, impulsivity and risk-seeking, which influences their propensity for criminal offending (Forrest et al. 2019; Smith, Chein, and Steinberg 2013; Hirschi and Gottfredson 1990). In response to this and to protect youth, courts have established minimum ages of responsibility: the age when a child becomes responsible for their actions and charges can be brought against them for law violations. The UN Committee on the Rights of the Child recommends age 12 as the minimum age (Laurent et al. 2011). Only four countries (i.e. Dominica, Grenada, St. Kitts and Nevis, and St. Lucia) met this guideline in 2015, the year our study data were collected, as displayed in table 1. Since 2015, Barbados and Guyana passed legislation raising the age of criminal responsibility in their respective countries to 12 years.

In Dominica, the Children and Young Persons Act of 1970 established the minimum age of criminal liability as 12 years. Grenada's Juvenile Justice Act of 2012 dictates the age of 12 as the age of criminal responsibility. St. Kitts and Nevis passed the Child Justice Act in 2013, which raised the criminal age of responsibility to 12 years (WIC News 2019). Under the previous Juvenile Justice Act, youth as young as 8 years old were held criminally responsible (WIC 2019). The age of criminal responsibility is 12 years in St. Lucia, according to the Children and Young Persons Act of 1972. This act was replaced by the Child Justice Act of 2018; however, the age of criminal responsibility remained the same.

As the region overall invested in rehabilitation for juveniles, two countries made legislative changes since 2015 to raise the age of criminal responsibility to the UN standard. At the time of data collection, the age of criminal responsibility in Barbados was 11 years, with a maximum age of 15 before being tried as an adult, governed by the Juvenile Offenders Act of 1932. However, juveniles aged 15 and younger were not permitted to be imprisoned and instead could be sent to a reform school where they could stay until age 18 (Reformatory and Industrial Schools Act 1926). In 2019, Barbados passed the Juvenile Justice Bill, which updated the minimum age of criminal responsibility to 12 years

Table 1: Juvenile justice legislation as of 2015.

Country	Age of criminal responsibility	Maximum age in juvenile system	Statute
Antigua and Barbuda	8	18 ¹	Child Justice Act, 2015
Barbados	11	18	Juvenile Offenders Act, 1932 Reformatory and Industrial Schools Act, 1926
Dominica	12	17	Children and Young Persons Act, 1970
Grenada	12	18 ²	Juvenile Justice Act, 2012
Guyana	10 ³	18 ⁴	Juvenile Offenders Act, 1931 The Training School Act, 1907
St. Kitts and Nevis	12	18	Child Justice Act, 2013
St. Lucia	12 ⁵	16 ⁶	Children and Young Persons Act, 1972
St. Vincent and Grenadines	8	16	The Juveniles Act, 1952
Trinidad and Tobago	7	18 ⁷	Summary Courts Act, 1918

¹Juveniles can be charged up until age 17 but can reside in secure residential facilities until age 18. Individuals can be prosecuted under the Child Justice Act 2015 up to the age of 20 under very limited circumstances.

²The Juvenile Justice Act 2012 specifically applies to youth under the age of 18 when proceedings against them began; however, the Director of Public Prosecutions can pursue action under this act up until age 20 in specific circumstances.

³In 2018, Guyana enacted a new Juvenile Justice Act specifying age 14 as the minimum age of criminal responsibility, though “this presumption can be rebutted where an evaluation is done of the child’s cognitive, emotional, psychological and social development” (Juvenile Justice Act 2018: 88).

⁴The Juvenile Justice Act 2018 allows proceeding beyond age 18 for any offence committed while the individual was under 18 years old. However, the act specifies that youth older than 17 should not remain in a juvenile facility unless it is “in the best interests of the juvenile and wouldn’t jeopardize the safety of others” (Juvenile Justice Act 2018: 54).

⁵Under the new Child Justice Act 2018, the age of criminal responsibility remains at 12 years.

⁶While juvenile courts deal with youth under the age of 16, the Children and Young Persons Act qualifies that a youth already involved with the juvenile court system remains so beyond age 16. While the majority of the Act refers to juveniles as those under 18, one subsection state that “the true age of the person brought before it has attained the age of 18 years, that person shall for the purposes of this Act, be deemed not to be a juvenile” (18). The Child Justice Act specifies adults are individuals who have reached the age of 18. Under this revision, the juvenile court handles cases over 18 when the criminal offence occurred while the person was a juvenile.

⁷Youth can remain at the Rehabilitative Centre in certain cases until the age of 21 when requested by the managers of the Rehabilitation Center and with the individual’s consent (Children Act 2012).

and stipulated that juveniles under 14 years of age could no longer be incarcerated (Williams 2019).

Similarly, the minimum age of criminal responsibility was 10 years in Guyana, which is governed by the Juvenile Offenders Act of 1931. Complementing this act, the Training School Act of 1907 governed juveniles' detention in schools up until the age of 18. Guyana's updated Juvenile Justice Act was adopted in 2018, specifying the minimum age of criminal responsibility as 14 years. Despite this, the act states, "this presumption can be rebutted where an evaluation is done of the child's cognitive, emotional, psychological and social development" (Juvenile Justice Act 2018: 88). It also states that individuals should not be housed in juvenile justice facilities beyond the age of 17 unless necessary and safe for other detainees. The Juvenile Justice Act 2018 allows juvenile justice system involvement beyond the age of 18 in Guyana when the proceedings begin before the youth turns 18 years old or if the criminal offence occurred before a youth was 18 years old. In response to the new act, a Children's Court has been established within the country (Braithwaite 2018).

The remaining three countries of interest in this article do not adhere to the UN standard for the age of criminal responsibility. In Antigua and Barbuda, the Child Justice Act of 2015 establishes the age of criminal capacity at age eight, although criminal capacity needs to be established at a higher level for youth under the age of 14 (Child Justice Act 2015). The Juveniles Act of 1952 in St. Vincent and the Grenadines also establishes that 8 years as the age of criminal responsibility. According to the Summary Courts Act in Trinidad and Tobago, children over age 7 can commit criminal offences. However, children under 10 years old in the country cannot be placed in prison or a rehabilitative centre; instead, they can be ordered to a children's home (Summary Courts Act 1918).

Incarceration in the Region

Relatively little research has focused on incarceration across the Caribbean, though research on the topic has increased as of late (Leslie 2020; Bailey 2013; Bailey and Coore-Desai 2009; Green 2011; Cooke and Wozniak 2010; Wallace, Hill, and Rosales 2020). From 2016 to 2018, the Inter-American Development Bank spearheaded interviews with incarcerated adults across six Caribbean countries (Barbados, Bahamas, Guyana, Jamaica, Suriname, and Trinidad and Tobago), arguably the most extensive research effort on incarceration in the region (Bailey 2020; Seepersad 2020; Sarsfield and Bergman 2017; Bergman et al. 2020). Much of the research to

date has been country-specific. Results typically derive from self-report surveys or are supplementary to broader evaluation projects. No longitudinal offender or incarceration studies exist, and there is limited comparison between those who are incarcerated and the general population.

As previously noted, rehabilitative and restorative practices have increased in popularity for juveniles; however, this has yet to extend to adult detainees. A majority of the general public across the Caribbean support punitive measures over preventative measures when asked what should be done to reduce criminal activity in their country (Vanderbilt University 2012). One indicator of this punitive approach is the high use of pre-trial detention in the region. In Trinidad and Tobago, almost 60 per cent of the prison detainees are pre-trial; men spend an average of 4–10 years incarcerated before their trial (World Prison Brief; Wallace, Hill, and Rosales 2020). However, there are unique cases where the aversion to rehabilitation and prevention efforts has been changing. In Jamaica, for example, Leslie (2020) noted recent improvements in conditions of imprisonment and the quality of rehabilitation programming.

Among adult prison populations, females comprise a much smaller proportion of the total prison population across the region (World Prison Brief; for more on high female incarceration rates in Barbados into the 20th century, see Green 2011). A survey of inmates in Barbados's adult facility identified a history of childhood physical abuse among adult inmates, with 10 per cent identifying daily abuse and approximately 30 per cent saying abuse occurred a few times a year (Bailey and Corre-Desai 2009). Almost 10 per cent of respondents were sexually molested as a child (Bailey and Corre-Desai 2009). This work fits in with a more extensive review of corrections in the Bahamas (Fielding et al. 2019). Anderson et al. (2020) provide a country-specific historical perspective of Guyana's prisons and connect the practices by the British while Guyana was still a colony to the current challenges facing the prison system. Likely not unique in the region, in Jamaica, some of the active correctional facilities were previously used to hold slaves being brought to the region (Tindigarkayo, Leslie, and Thwaites 2019). This historical perspective is essential to acknowledge when contextualizing the penal system in the Caribbean for both adults and juveniles.

Juvenile Incarceration

The rate of juvenile incarceration is generally low throughout the Caribbean. On average, juveniles comprise only 2.5 per cent of the prison population (World Prison Brief). Each of the countries of focus (with the

exception of Dominica) in 2011 had policies restricting housing youth offenders with adults. Despite this, a 2011 assessment found countries lacked facility space to house youth, and juveniles in Jamaica and Grenada were housed in adult prisons. This is also a concern for female juveniles; three countries did not have separate youth facilities for females (including Trinidad and Tobago, Grenada and St. Vincent and the Grenadines) (Laurent et al. 2011; U.S. State Department 2019). With the lack of space and the limited number of juvenile detainees, the same report noted that authorities often could not separate youth based upon their level of risk or protection needs (Laurent et al. 2011).

Lack of capacity extended to rehabilitation programming, with few services offered for youth offenders (Laurent et al. 2011). The previously mentioned 2011 assessment found that countries were compliant with offering medical services and educational training, although the effectiveness of these services has not been measured. Re-entry services, however, are largely not present (Laurent et al. 2011). Similarly, a 2018 report focused on St. Kitts and Nevis, St. Lucia, and Guyana documented limited rehabilitation programs in prisons across the three countries. In St. Lucia and St. Kitts and Nevis, schooling and vocational training were provided as well as sporadic anger replacement therapy. The lack of programming is exacerbated when youth are housed in adult facilities, where even fewer options for rehabilitation programs exist (Williams et al. 2018).

The limited research available on juvenile justice systems indicates that youth are largely not involved in violent crime; instead, they are primarily incarcerated for status offences (UNDP 2010; Deosaran and Chadee 1997). These status offences included running away from home, being "out of control" and other behaviours for which adults cannot be incarcerated. Status offences were more prevalent among juvenile females compared to males. In contrast to this assertion, Deosaran and Chadee (1997) interviewed youth offenders in Trinidad and found that most were incarcerated for robbery or robbery-related offences. However, in their study, almost 45 per cent of youth was incarcerated for a status offence. Further research indicates that juvenile males are more likely to be involved in a violent offence (UNDP 2010). To date, recidivism rates among Caribbean juveniles are not known.

The Current Study

While improvements in juvenile justice systems in the Caribbean have drawn increased attention from researchers, there is still limited

information on even the most basic issues related to incarcerated youth. This study seeks to fill this gap by providing a preliminary inquiry into youth incarcerated across nine English-speaking Caribbean nations: Antigua and Barbuda, Barbados, Dominica, Grenada, Guyana, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, and Trinidad and Tobago. Specifically, this article explores the following questions:

1. How many youth are incarcerated in the countries of interest and what facilities are these offenders detained in?
2. What is the demographic profile of detained youth in each country?
3. What type of criminal behavior and victimization experiences do detained youth report engaging in prior to their incarceration?
4. How many youth in the Caribbean are incarcerated prior to trial and what offences are youth charged/convicted of?

Data and Methods

Data source

In furthering these inquiries, we use data from the CYDS collected between June 2014 and November 2015. At the time of data collection, fourteen detention centres housed juveniles across nine nations, all of which allowed youth participation in the study. Youth detained in each of the identified facilities for at least 1 week were eligible to participate. Our sample does not include recently booked arrestees or those who had been recently arrested and subsequently released. Interviews were conducted with youth in person by a trained research team. Of the 386 detained youth eligible for participation in the study, 365 agreed to participate, resulting in a response rate of 94.6 per cent. Twenty youth were not available to be surveyed, and one refused to participate in the study.

Our sample includes individuals housed in juvenile correctional facilities. The only exception was for St. Vincent and the Grenadines where prior to conviction youth remain in police stations. Our sample includes respondents who are outside the age of criminal responsibility and, which we note as a limitation, where the implementation of statutes might not align with practice. While we received responses from some youth housed in adult facilities pre-trial, our sample necessarily excludes any juveniles housed in adult facilities. Our final sample consisted of 365 respondents.

Additionally, given the paucity of publically available census data in the region, we draw population estimates for race demographics

by country from the CIA Factbook. Estimates for the latest year available are presented, spanning 2001 (Dominica and St. Kitt and Nevis), 2010 (Barbados and St. Lucia), 2011 (Antigua and Barbuda and Trinidad and Tobago) and 2012 (Guyana and Saint Vincent and the Grenadines).

Measures

Demographics: We include four self-reported demographic characteristics of respondents: age, gender, household status and race/ethnicity. Age is a continuous measure of how old the respondent was when they completed the survey. Respondents identified as either male or female. Household status is a measure of whether, in the year prior to their incarceration, they lived in a home with only one parent or no parent in the home. Race/ethnicity was distinguished as individuals of African descent, East-Indian descent, indigenous (including Carib), other/unspecified (including Creole and Mulatto) and mixed race.

Delinquency/victimization: Juveniles in the CYDS were asked about personal experiences in 12 months prior to their incarceration. In our analysis, we include all measures of prior delinquency and victimization as binary measures. We report whether the respondent engaged in any alcohol or marijuana use. Next, we include whether the respondent sold drugs at least once in the previous year. We are limited by a high amount of missing data for this variable. Previous violent offending is comprised of whether the respondent had self-reported engaging in any of the following behaviour in the previous year prior to incarceration: (1) hit someone with the idea of hurting him or her, (2) carried a hidden weapon (of any kind) for protection, (3) attacked someone with a weapon (of any kind), (4) used a weapon (of any kind) or force to get money or things from people or (5) gotten involved in fights with other groups. A respondent was identified as someone who was engaged in previous property offending if he self-reported any of the following in the year before his incarceration: (1) avoided paying for something such as movies or the bus, (2) purposely damaged or destroyed property that did not belong to them, (3) illegally spray painted a wall or building, (4) stolen or tried to steal something and (5) gone into a building to steal something. Truancy is a measure of whether the respondent had skipped class at least once in the prior year before incarceration without an excuse. Individuals also self-reported current gang membership (i.e. they were asked: "Are you currently a member of a gang?"). Finally, victimization is a measure of whether the respondent (1) got hit by someone trying to hurt him/her, (2) have someone use a threat,

a weapon, or force to get money or things from him/her, and (3) got attacked by someone with a weapon or by someone trying to seriously hurt or kill him/her in the year prior to incarceration.

Remand status: The remand status of each respondent was documented by the interviewer. Youth were categorized as sentenced, remanded (e.g. pre-trial) or other.

Criminal offences/convictions: Individuals were asked: "What type of crime were you charged with that put you here?" They could respond with the following crime categories: violent, drug use, drug sales, petty theft, theft, taxing or other. In our analysis, we recoded these offence types into four categories: violent crime, property crime, drug crime and other. With the exception of Guyana and Trinidad and Tobago where respondent's crimes were not recorded by interviewers, self-reported offences were verified through official data. In these nations, the majority of offences in other category were status offences. Criminal offence/convictions are not mutually exclusive categories and youth could have engaged in both a violent crime and a property, drug or other crime.

Analysis plan

First, we present the number of youth incarcerated in each country and then we break this down into the number of youth housed at each facility. Next, we discuss the demographic characteristics of detainees, including age, gender, household status prior to incarceration and race. Then the detainees' self-reported delinquency and victimization experiences in the year prior to incarceration for the full sample are presented. Finally, remand status by country and juveniles' criminal offence or conviction are displayed by country. When applicable, bivariate statistics, chi-square and analysis of variance tests, comparing each item by country are presented and discussed.

Results

Prevalence of juvenile incarceration

Table 2 presents the total number of youth detainees by nation. We see that several countries incarcerate relatively few youth; Dominica and Grenada housed only 6 youth and St. Lucia housed 7. At the time of data collection, 15 youth were detained in St. Kitts and Nevis, 19 in Antigua and Barbuda and 20 in St. Vincent and the Grenadines. The three countries with higher

Table 2: Prevalence of juvenile incarceration by country and facility.

Country	Detained youth	Facility	# by facility
Antigua and Barbuda	19	Boys Training School	19
Barbados	46	Government Industrial School (Boys)	31
		Government Industrial School (Girls)	15
Dominica	6	Dominica State Prison	4
		Operation YouthQuake	2
Grenada	6	Her Majesty's Prison	5
		Richmond Hills Prison	1
Guyana	89	New Opportunity Corps	89
St. Kitts and Nevis	15	New Horizon Rehabilitation Center	15
St. Lucia	7	Boys Training Centre	7
St. Vincent and Grenadines	20	Belle Isle	8
		Her Majesty's Prison Kingstown	8
		Liberty Lodge	2
		Police Headquarters	1
		Questella Police Station	1
Trinidad and Tobago	157	St. Jude's School for Girls	35
		St. Michael's School for Boys	22
		Youth Training Center	100

general populations, in turn, had more youth detained. Forty-six youth were incarcerated in Barbados, 89 in Guyana and 157 in Trinidad and Tobago.

With relatively low numbers of youth detainees, there are also few facilities where youth are housed. In Antigua and Barbuda, there was only one facility for youth – the Boys Training School.⁸ Barbados operated both a boys' and girls' Government Industrial School. In Dominica, youth were housed in the state prison and at Operation YouthQuake. Operation YouthQuake was primarily for at-risk youth, although some juveniles are

⁸In 2011, the Boys Training School was in operation and housed males convicted of minor offences. There were two private homes for girls involved in the justice system, though these are not reflected in our 2015 analysis (Laurent et al. 2011).

sentenced to the program.⁹ Detainees in Grenada were remanded to Her Majesty's Prison or Richmond Hills Prison.¹⁰ In Guyana, youth were sentenced to New Opportunity Corp.¹¹ Youth were placed in the New Horizon Rehabilitation Center in St. Kitts and Nevis.¹² In St. Lucia, youth resided at the Boys Training Center.¹³ At the time of this survey, in St. Vincent and the Grenadines, youth were housed at Belle Isle, Her Majesty's Prison (HMP) Kingstown, Liberty Lodge, the Police Headquarters and Questella Police Station.¹⁴ Finally, in Trinidad and Tobago, youth were detained at St. Jude's School for Girls, St. Michael's School for Boys and the Youth Training Center.¹⁵

Demographic characteristics

Next, we examine the demographic characteristics of detainees by country. First, as shown in table 3, the age of incarcerated youth ranges from 8 to 28 years. The mean age across countries was 16.19, with Guyana (15.16), Barbados (15.27), Antigua and Barbuda (15.32), St. Lucia (15.71), and St. Kitts and Nevis (15.73) having a slightly lower mean age and Dominica

⁹In Dominica in 2011, no separate facility for youth existed and youth were housed in the adult facility, though in a separate cell. In April 2011, the government opened a new facility to house males and females up to 18 – CHANCES (Laurent et al. 2011).

¹⁰Grenada's juvenile facility was destroyed by a storm prior to 2011, so at that time, youth were housed in the adult prison or smaller lock-ups (Laurent et al. 2011).

¹¹As of 2011 in Guyana, prior to conviction, juveniles were primarily housed in police lock-ups. The New Opportunities Corps is a minimum-security school facility that refers to wards as students, housing both males and females. Overcrowding was an issue, with the facility housing double the number of youth than intended (Laurent et al. 2011). As of a subsequent survey that occurred around 2018, the majority of juvenile detainees are still housed at New Opportunities Corps; however, some reside in Sophia Detention Center and Timerhi Prison (Williams et al. 2018).

¹²There are no facilities for youth detention in St. Kitts and Nevis in 2011; and they either went to the main prison or stayed in police stations (Laurent et al. 2011).

¹³Prior to 2011, in St. Lucia, convicted youth males went to an industrial training school and those older than 16 went to prison; there was no facility for youth females. The Boys Training Center is a detention facility for males under 16 who have been convicted of an offence; however, they also house at-risk males (Laurent et al. 2011).

¹⁴In St. Vincent and the Grenadines, prior to conviction youth remained in police stations. There were no correctional facilities for convicted youth; those over age 16 could be sent to adult facilities (Laurent et al. 2011).

¹⁵In 2011, youth in Trinidad could be sent to industrial schools and other correctional facilities. The Youth Training center housed all offending youth, not separating more violent offenders from younger offenders. The facility focuses on rehabilitation with education and training opportunities and family visitation. St. Michael's Home for Boys housed males aged 10–15 and St. Jude's Home for Girls' housed females of the same age. Both of these facilities, now closed, also took in youth who were at risk or homeless; however, approximately 95 per cent of the boys at St. Michaels were involved in the juvenile justice system (Loop News 2018). Subsequent legislation in 2015 established the Youth Training Center as the primary facility for males aged 16–18. Girls who were not able to be managed at St Jude's were housed at the adult female facility (Laurent et al. 2011).

Table 3: Age, gender and household demographics by country.

Country	Age (SD)	Age range	Percent male	Percent female	Single-parent home	No parent at home
Antigua and Barbuda	15.32 (1.42)	13–17	100.00 (19)	0.00	73.68 (14)	21.05 (4)
Barbados	15.27 (1.23)	13–17	67.39 (31)	32.61 (15)	73.91 (34)	19.57 (9)
Dominica	16.50 (0.71)	16–17	100.00 (6)	0.00	66.67 (4)	33.33 (2)
Grenada	17.67 (1.37)	15–19	100.00 (6)	0.00	50.00 (3)	16.67 (1)
Guyana	15.16 (1.55)	8–18	61.36 (54)	38.64 (34)	50.56 (45)	26.97 (24)
St. Kitts and Nevis	15.73 (1.39)	12–18	60.00 (9)	40.00 (6)	40.00 (6)	13.33 (2)
St. Lucia	15.71 (0.95)	15–17	100.00 (7)	0.00	42.86 (3)	28.57 (2)
St. Vincent and Grenadines	17.90 (3.61)	12–26	95.00 (19)	5.00 (1)	80.00 (16)	15.00 (3)
Trinidad and Tobago	16.91 (2.91)	10–28	77.07 (121)	22.93 (36)	59.87 (94)	22.93 (36)
Total	16.19 (2.50)	8–28	74.73**	25.27**	60.00*	22.74

* $p < .05$; ** $p < .01$.

Missing – age ($n = 16$), sex ($n = 1$).

(16.50), Grenada (17.67), St. Vincent and the Grenadines (17.90) and Trinidad and Tobago (16.91) having slightly higher mean ages. These age differences were not significant across countries.

Gender differences, in contrast, were significantly different across countries. Presented in table 3, almost half of the countries in this sample (Antigua and Barbuda, Dominica, Grenada and St. Lucia) had only male youth incarcerated at the time of our data collection. Ninety-two females were incarcerated in the remaining countries: a quarter of the full sample. Approximately 40 per cent of the juvenile population in Guyana and St. Kitts and Nevis was female. In Barbados and Trinidad and Tobago, approximately 33 and 23 per cent of the juvenile correctional populations were female, respectively. One female youth was detained in St. Vincent and the Grenadines.

Respondent's household statuses in the year prior to incarceration by country are also presented in table 3. Overall, 60 per cent of youth lived in a single-parent home and almost 23 per cent lived in a home with no parents present. Eighty per cent of youth detainees in St. Vincent and the Grenadines lived in a single-parent home and almost three-quarters did so in Antigua and Barbuda and Barbados. Country differences were significant for youth in a single-parent household but not significant for youth with no parent in the home.

Table 4 presents youth race and ethnic demographics across countries alongside the racial breakdown in the general population. Differences in detainee race/ethnicity across countries were significant, with the exception of mixed-race category, which can be expected due to the differences in the racial makeup of the general populations. The majority of offenders were of African descent; these youth comprised 65.48 per cent of the youth incarcerated. This was followed by those of East Indian descent at 13.70 per cent, other/unspecified at 12.05 per cent, those of mixed race at 5.48 per cent and indigenous youth at 3.29 per cent. While we do not have data to test the differences between the incarcerated versus the general population, we observe that the proportion of detainees of African descent exceeded the population percentage in all of the countries in our sample. Those of East Indian descent were underrepresented in Guyana and Trinidad and Tobago but overrepresented in St. Vincent and the Grenadines.

Delinquency/victimization prior to incarceration

Next, we explore self-reported delinquency and victimization experiences in the year prior to the youth's incarceration. In table 5, we see that the differences in alcohol and marijuana use were significant across countries. Overall, 47 per cent of youth detainees drank alcohol at least once in the year prior to their incarceration, and 67 per cent of respondents had used marijuana at least once. Almost 40 per cent of incarcerated youth identified that they sold drugs on at least one occasion in the previous year. The vast majority (86 per cent of the sample) had engaged in violent offending in the previous year and even more, 92 per cent, had engaged in property offending. Seventy-seven per cent of youth disclosed that they had missed school at least once without an excuse in the year prior to their incarceration. These measures do not significantly differ across countries. In contrast, the gang-related measure differed significantly across countries. Thirty-seven per cent of the youth incarcerated self-identified as a

Table 4: Race demographics by country.

Country	African descent		East Indian descent		Indigenous		Other/Unspecified		Mixed	
	Detained, % (n)	Population, %	Detained % (n)	Population, %	Detained % (n)	Population, %	Detained % (n)	Population, %	Detained, % (n)	Population, %
Antigua and Barbuda	100.00 (19)	87.30	0.00	0.00	0.00	0.00	0.00	7.90	0.00	4.70
Barbados	93.48 (43)	92.40	0.00	1.30	0.00	0.00	2.17 (1)	3.20	4.35 (2)	3.10
Dominica	100.00 (6)	86.60	0.00	0.00	0.00	2.90	0.00	1.50	0.00	9.10
Grenada	83.33 (5)	82.40	0.00	2.20	0.00	0.00	0.00	2.20	16.67 (1)	13.30
Guyana	57.30 (51)	29.30	26.97 (24)	39.80	12.36 (11)	10.50	1.12 (1)	0.20	2.25 (2)	19.90
St. Kitts and Nevis	100.00 (15)	92.50	0.00	1.50	0.00	0.00	0.00	3.00	0.00	3.00
St. Lucia	100.00 (7)	85.30	0.00	2.20	0.00	0.00	0.00	2.30	0.00	10.90
St. Vincent and the Grenadines	85.00 (17)	71.20	10.00 (2)	1.10	5.00 (1)	3.00	0.00	1.70	0.00	23.0
Trinidad and Tobago	48.41 (76)	34.20	15.29 (24)	35.40	0.00	0.00	26.75 (42)	7.50	9.55 (15)	23.0
Total	65.48 (239)**		13.70 (50)**		3.29 (12)**		12.05 (44)**		5.48 (20)	

*p < .05; **p < .01.

Table 5: Self-reported delinquency/victimization in the year prior to incarceration.

	N	Mean (SD)	Range	Country difference
Any alcohol use	363	0.47 (0.50)	0-1	*
Any marijuana use	364	0.67 (0.47)	0-1	**
Sold drugs	207	0.39 (0.49)	0-1	**
Violent offending	365	0.86 (0.35)	0-1	-
Property offending	365	0.92 (0.28)	0-1	-
Truancy	362	0.77 (0.43)	0-1	-
Current gang member	302	0.37 (0.48)	0-1	**
Victimization	365	0.82 (0.38)	0-1	-

* $p < .05$; ** $p < .01$.

current gang member. Finally, approximately 80 per cent of incarcerated youth has been the victim of a violent offence, which did not differ significantly across countries.

Remand status

The remand status of detainees for each country is displayed in table 6. In the full sample, 68.27 per cent of youth detainees were sentenced, just

Table 6: Remand status of juvenile detainees by country.

Country	Sentenced	Remand	Other
Antigua and Barbuda	89.47 (17)	10.53 (2)	0.00
Barbados	73.91 (34)	26.09 (12)	0.00
Dominica	83.33 (5)	16.67 (1)	0.00
Grenada	100.00 (6)	0.00	0.00
Guyana	100.00 (89)	0.00	0.00
St. Kitts and Nevis	66.67 (10)	33.33 (5)	0.00
St. Lucia	100.00 (7)	0.00	0.00
St. Vincent and Grenadines	47.37 (9)	47.37 (9)	5.26 (1)
Trinidad and Tobago	43.84 (64)	49.32 (72)	6.85 (10)
Total	68.27 (241)**	28.61 (101)**	3.12 (11)

* $p < .05$; ** $p < .01$.

Missing — remand ($n = 12$).

over a quarter were remanded (i.e. pre-trial), and approximately 3 per cent were classified as other. These differences are significant across countries, with the exception of the other classification. In three countries (Grenada, Guyana and St. Lucia), all youth detainees were already sentenced. The number of youth sentenced remained high in Antigua and Barbuda at 89.47 per cent, Dominica at 83.33 per cent and relatively high in Barbados at 73.91 per cent. In St. Kitts and Nevis, approximately 33 per cent of youth was remanded. The highest number of youth detained awaiting trial or sentencing was in St. Vincent and the Grenadines, with nine youth awaiting trial (47.37 per cent of the sample population), and in Trinidad and Tobago with 72 youth awaiting trial (49.32 per cent of the sample population).

Criminal offences/convictions

Finally, in table 7, we explore criminal offences or convictions of detainees by country. The four categories of crimes (violent, property, drug and other) are not exclusive, so totals exceed 100 per cent in some countries. Only youth detained for property offences differs significantly across countries. Overall, a quarter of youth offenders were charged with a violent crime. Forty-five per cent of youth in St. Vincent in the Grenadines fall into this category, while no youth in Grenada do. Just over a quarter of youth (27.67 per cent) is detained for property crimes. One hundred per cent of youth in Grenada are charged or convicted of property crimes. Only

Table 7: Criminal offences/convictions by country.

Country	Violent	Property	Drug	Other
Antigua and Barbuda	21.05 (4)	42.11 (8)	10.53 (2)	26.32 (5)
Barbados	32.61 (15)	28.26 (13)	2.17 (1)	45.65 (21)
Dominica	16.67 (1)	66.67 (4)	0.00	16.67 (1)
Grenada	0.00	100.00 (6)	16.67 (1)	0.00
Guyana	11.24 (10)	30.34 (27)	12.36 (11)	33.71 (30)
St. Kitts and Nevis	26.67 (4)	20.00 (3)	6.67 (1)	46.67 (7)
St. Lucia	42.86 (3)	57.14 (4)	0.00	0.00
St. Vincent and Grenadines	45.00 (9)	55.00 (11)	5.00 (1)	15.00 (3)
Trinidad and Tobago	27.39 (43)	15.92 (25)	5.73 (9)	45.86 (72)
Total	24.38 (89)	27.67 (101)**	7.12 (26)	38.08 (139)

* $p < .05$; ** $p < .01$.

about 7 per cent of youth across all of the study nations are detained for drug offences. Youth detained for a drug offence was higher in Antigua and Barbuda (10.53 per cent), Grenada (16.67 per cent) and Guyana (12.36 per cent). Finally, almost 40 per cent of our sample was charged with other crimes, not all of which were specified but included status offences such as breach of curfew, driving offences, running away from home and wandering. Forty-five per cent of other charges originated in Barbados, St. Kitts and Nevis, and Trinidad and Tobago.

Discussion

Our research is one of the first to describe the scope and nature of incarcerated youth in the English-speaking Caribbean. We examined the number of youth incarcerated in juvenile facilities in each country, the demographic profile of these youth, the scope and nature of self-reported delinquency prior to incarceration among detainees, the proportion of youth who are incarcerated pre-trial and the offences that lead to these youth being incarcerated.

We found that there was substantial variation between countries in the number of youth incarcerated in detention facilities and that the variation was largely related to the population size of each nation. While not surprising, it is important to emphasize the small number of youth detainees in many of the study nations. For example, Dominica, Grenada and St. Lucia each had seven or fewer detained youth, and St. Vincent and the Grenadines, Antigua and Barbuda and St. Kitts and Nevis each had twenty or fewer detained youth. Beyond this, among these same six nations, female detainees were only seven.

Given the small number of youth housed in these facilities, there is little need to rely on traditional methods of incarceration, which are often costly and provide few opportunities for rehabilitation and pro-social development. Instead, non-traditional responses, such as personalized individual and family counselling, house arrest and electronic monitoring, which in some nations might not be possible due to their expense, are possible. Many English-speaking Caribbean nations have looked to the United States, Canada and Western Europe for guidance on matters related to incarceration. However, given the substantial differences in sizes of the populations served, many English-speaking Caribbean nations might consider home-grown, highly personalized approaches that best serve the needs of the youth and have the greatest chance for success. Given the recent evaluation results that showed

family-based counselling is an effective strategy for reducing risk among youth in Guyana (Katz and Cheon 2020), combined with our finding that about 80 per cent of incarcerated youth resided in a home with at least one parent, intensive family-based counselling along with other intervention strategies might be an effective alternative for some incarcerated youth.

Our findings also showed that Trinidad and Tobago and Guyana incarcerated youth who were as young as eight and ten years old, respectively. The UN Convention on the Rights of the Children established the minimum age of criminal responsibility as 12 years. Incarcerating youth at such young age increases the potential for victimization, association with criminal peers and other harms. Legislative change is required to address the official age of criminal responsibility. However, prison officials can affect the immediate surroundings of young detainees by offering increased surveillance to protect against victimization and limiting youth's interactions with older, chronic offenders, which we found was particularly problematic in Trinidad and Tobago and St. Vincent and the Grenadines where those up to the age of 26 and 28 years were housed alongside juveniles. Notably, solitary confinement should not be implemented as an easy solution to address this issue as this confinement can cause and exacerbate trauma and mental health concerns (Haney 2003). It is important to emphasize that our survey data are self-report and subject to error; we did not have the capacity to validate the age of respondents self-report data.

Our results indicated that youth of African descent comprise about two-thirds of our sample. Though we were not able to statistically compare differences at the country level by race of the incarcerated youth and the general youth population, descriptive statistics indicate there could be disparities, and youth of African descent could be overrepresented in the juvenile prison population. In all nine nations, detained youth were more likely to be of African descent than those in the general population. To date, there has been little research in the English-speaking Caribbean examining racial and ethnic disparities in policing and the courts. Further research on this issue is needed, and education and awareness campaigns on any observed disparities should target policing and courts systems in countries where youth of African descent are overrepresented in the juvenile justice system.

Additionally, our findings show some English-speaking Caribbean nations have a high number of individuals incarcerated who are not yet convicted. In St. Vincent and the Grenadines and Trinidad and

Tobago, almost 50 per cent of detained youth are awaiting trial. Likewise, about 33 per cent of detained youth in St. Kitts and Nevis, about 26 per cent of detained youth in Barbados and about 17 per cent of detained youth in Dominica are awaiting trial. These findings are similar to those observed by Seepersad (2020) and Wallace, Hill, and Rosales (2020) in Trinidad and Tobago. While our data do not permit us to distinguish how long youth have been detained awaiting trial, these figures indicate a need for review by policymakers to minimize the use of pre-trial detention among youth. Previous research, although not conducted in the Caribbean, has revealed that the pre-trial detention of youth can result in innocent defendants pleading guilty, longer sentences and greater rates of recidivism following incarceration (Heaton et al. 2017). The pre-trial detention of youth has also been found to result in greater rates of depression, suicide and educational failure; and in some countries, detained youth are likely to be mistreated, abused and experience trauma from being removed from their home and family (Holman and Ziedenberg 2006).

Our results indicated that only about a quarter (24.38 per cent) of detained youth were incarcerated for violent offences, about 28 per cent were incarcerated for property crimes and about 7 per cent for a drug offence. Still, about 38 per cent of youth were incarcerated for 'other' offence. This category captures status offences, such as running away or wandering, which are not criminal when committed by adults. Incarceration, which is costly for society in terms of taxpayer dollars and because it often does not address underlying issues that lead youth to engage in delinquency, is typically not an effective response for most offences, which are primarily non-violent and typically deemed less serious. While incarcerated, youth are put into direct contact with more violent and chronic offenders, potentially creating a network of negative peers/associates upon release. Diversion programs, non-profit organizations and alternative highly personalized responses might be better suited to respond and address youth engaging in non-violent and status offences rather than relying upon incarceration.

With the above said, our findings suggest that detained youth participated in high rates of problem behaviour prior to incarceration. About 86 per cent of the detained youth, for example, self-reported involvement in violence prior to incarceration. Likewise, a high proportion of incarcerated youth self-reported involvement in property offences (92 per cent), truancy (77 per cent), marijuana use (67 per cent), drug sales (39 per cent) and gangs (37 per cent). Many also self-reported being the victim of a crime

(82 per cent), which is suggestive of a high involvement in crime (Jennings, Piquero, and Reingle 2012). Combined these findings suggest that many incarcerated youth are active offenders who are involved in serious criminality. Additional research is needed to further understand the trajectory of offending in the Caribbean and prior contact of incarcerated youth with the police and other criminal justice officials prior to their detention.

While the findings presented here detail the Status of Youth Incarceration in several English-speaking Caribbean nations, much is still unknown about the incarcerated youth. This includes details about the impact of conditions of confinement and whether incarcerated youth experience victimization. Consistent and systematic data collection needs to identify trends and assist in the creation of culturally specific evidence-based responses to youth who are incarcerated. Future work also needs to examine the circumstances prior to youth being incarcerated. Are some youth prone to incarceration because of family circumstances? Do police target some youth because of their demographic characteristics or social circumstances and connections? Further inquiry into these questions and more can inform policy and programming to reduce and prevent juvenile incarceration. Finally, the consequences of incarceration for juveniles need to be examined. Incarceration might serve as a shock, deterring future criminal behaviour in youth; however, prior research suggests it is more likely that the time youth are incarcerated has far-reaching, long-term, negative consequences for their social and cognitive development and, consequently, their lives (Steinberg, 2007). Youth miss valuable time forming family and peer relationships, time in school and time engaged in age-appropriate social activities, which may harm their life trajectories.

Juvenile justice systems have typically been more likely to introduce diversion, rehabilitation and restorative justice measures, which arguably offer a more humane experience and are theorized to reduce further offending post-release (Braithwaite 1989). Among adult inmates in Her Majesty's Prison Fox Hill in the Bahamas, a survey identified interest in meeting with their victims or their victim's families, a cornerstone of restorative justice measures (Wallace and Wylie 2013). Such a program has since been successfully started in the adult prison (the Sycamore Tree Project). Similar restorative efforts exist in Jamaica and Trinidad and Tobago. Opportunities for juveniles to engage in restorative measures such as these or diversion or other rehabilitation programming should be prioritized if these activities are found effective in reducing recidivism. This requires further research and program evaluations on current

and planned diversion and rehabilitation-focused programs. One program that might hold promise as a starting point for other countries is "A New Path" in Jamaica. The program has been successful in improving re-entry services for juvenile offenders in the country, focusing on educational, vocational and employment opportunities, technical training, and psychosocial and emotional services (Tindigarkayo, Leslie, and Thwaites 2019).

Efforts to reduce crime and reduce recidivism among youth in the Caribbean must consider the unique social conditions in the region. Prevention efforts designed and implemented in high-income countries should not automatically be replicated in developing nations (Atienzo, Baxter, and Kaltenthaler 2017). While successful programs imported from the United States, Canada or the United Kingdom might transfer well and should not be discounted, the Caribbean should develop their own toolbox of evidence-based practices in sanctioning youth to continue to reduce crime and enhance public safety and the lives of young citizens.

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References

- Anderson, C., M. Ifill, E. Adams, and K. Moss. "Guyana's Prisons: Colonial Histories of Post-Colonial Challenges." *The Howard Journal of Crime and Justice* 59, no. 3 (2020): 335-349.
- Atienzo, E.E., S.K. Baxter, and E. Kaltenthaler. "Interventions to Prevent Youth Violence in Latin America: A Systematic Review." *International Journal of Public Health* 62 (2017): 15-29.
- Bailey, C. In *Survey of Individuals Deprived of Liberty: Caribbean 2016-2019, Barbados Country Report*, edited by D.M. King, V. Velez-Grajales, and L. Marmolejo. Washington, D.C: Inter-American Development Bank, 2020.

- Bailey, C. "Exploring Female Motivations for Drug Smuggling on the Island of Barbados: Evidence From Her Majesty's Prison, Barbados." *Feminist Criminology* 8, no. 2 (2013): 117-141.
- Bailey, C., and C. Coore-Desai. "Offender Abuse History: Findings From Her Majesty's Prison, Barbados." *Caribbean Journal of Criminology and Public Safety* 14, no. 1-2 (2009): 49-80.
- Bergman, M., R. Seepersad, A. Safranoff, and F. Cafferata. In *Regional Comparative Report, Survey of Individuals Deprived of Liberty: Caribbean 2016-2019, The Bahamas, Barbados, Guyana, Jamaica, Suriname, and Trinidad and Tobago*, edited by D.M. King, V. Velez-Grajales, and L. Marmolejo. Inter-American Development Bank, 2020. Retrieved from <https://publications.iadb.org/publications/english/document/Regional-Comparative-Report-Survey-of-Individuals-Deprived-of-Liberty-Caribbean-2016-2019-The-Bahamas-Barbados-Guyana-Jamaica-Suriname-and-Trinidad-and-Tobago.pdf>.
- Braithwaite, I. *Children's Court Signals New Humane Approach to Juvenile Justice*. Guyana Department of Public Information, 2018. Retrieved from <https://dpi.gov.gy/childrens-court-signals-new-humane-approach-to-juvenile-justice/#gsc.tab=0>.
- Braithwaite, J. *Crime, Shame, and Reintegration*. New York, NY: Cambridge University Press, 1989.
- Children and Young Persons Act. "Dominica," 1970. Retrieved from http://ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=75102.
- Children and Young Persons Act. (1972). St. Lucia.
- Child Justice Act. "Government Printing Office, Antigua and Barbuda," 2015. Retrieved from <http://laws.gov.ag/wp-content/uploads/2019/02/a2015-23.pdf>.
- Child Justice Act. "Saint Lucia," 2018. Retrieved from <https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/108393/133952/F1029103446/LCA108393.pdf>.
- CIA. *The World Factbook*. Retrieved from <https://www.cia.gov/library/publications/resources/the-world-factbook/>.
- Cooke, D. J., and E. Wozniak. "PRISM Applied to a Critical Incident Review: A Case Study of the Glendairy Prison Riot and Its Aftermath in Barbados." *International Journal of Forensic Mental Health* 9, no. 3 (2010): 159-172.
- Deosaran, R., and D. Chadee. "Juvenile Delinquency in Trinidad and Tobago: Challenges for Social Policy and Caribbean Criminology." *Caribbean Journal of Criminology and Social Psychology* 2, no. 2 (1997): 36-83.
- Fielding, W., V. Balance, P. Smith, A. Veyrat-Pontet, and H. Sutton, eds. *Our Prisoners: A Collection of Papers Arising from a 2016 Survey of Inmates at The Bahamas Department of Correctional Services at Fox Hill*. Inter-American Development Bank, 2019. Retrieved from <https://publications.iadb.org/en/our-prisoners-collection-papers-arising-2016-survey-inmates-bahamas-department-correctional>.
- Forrest, W., C. Hay, A.O. Widdowson, and M. Rocque. "Development of Impulsivity and Risk-Seeking: Implications for the Dimensionality and Stability of Self-Control." *Criminology* 57, no. 3 (2019): 512-543.

- Foss, A., B. Laurent, D. de Garcia, H. Charles, M. Puucilowski, N. Hazel, R. Sahai, and S. McKenzie. "Eastern and Southern Caribbean Youth Assessment (ESCYA)." USAID, 2013. Retrieved from [https://www.undp.org/content/dam/trinidad_tobago/docs/DemocraticGovernance/Publications/ESCYA%20Final%20Report%20\[FINAL%20SUBMISSION\]%2031%20Oct.pdf](https://www.undp.org/content/dam/trinidad_tobago/docs/DemocraticGovernance/Publications/ESCYA%20Final%20Report%20[FINAL%20SUBMISSION]%2031%20Oct.pdf).
- Gentle-Genitty, C., J. Kim, E.-H. Yi, D. Slater, B. Reynolds, and N. Bragg. "Comprehensive Assessment of Youth Violence in Five Caribbean Countries: Gender and Age Differences." *Journal of Human Behavior in the Social Environment* (2017). <https://doi.org/10.1080/10911359.2016.1273811>.
- Green, C. A. "The Abandoned Lower Class of Females: Class, Gender, and Penal Discipline in Barbados." *Comparative Studies in Society and History* 53, no. 1 (2011): 144–179.
- Haney, C. "Mental Health Issues in Long-Term Solitary and "Supermax" Confinement." *Crime and Delinquency* 49, no. 1 (2003), 124–156.
- Heaton, P., S. Mayson, and M. Stevenson. "The Downstream Consequences of Misdemeanor Pretrial Detention." *The Stanford Law Review* 69, no. 3 (2017): 711–794.
- Holman, B., and J. Ziedenberg. "The Dangers of Detention: The Impact of Incarcerating Youth in Detention and Other Secure Facilities," 3–10, *JUST. POL'Y INST.* (Nov. 28th), 2006. http://www.justicepolicy.org/images/upload/06-11_rep_dangersofdetention_jj.pdf.
- Jennings, W. G., A. R. Piquero, and J. M. Reingle. "On the Overlap between Victimization and Offending: A Review of the Literature." *Aggression and Violent Behavior* 17, no. 1 (2012): 16–26.
- Juvenile Justice Act. "Grenada," 2012. Retrieved from <https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/98278/116883/F-579767975/GRD98278.pdf>.
- Juvenile Justice Act. "Guyana," 2018. Retrieved from http://ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=108886&p_country=GUY&p_count=194&p_classification=01.04&p_classcount=15.
- Juvenile Offenders Act. "Barbados," 1932. Retrieved from <https://www.cavehill.uwi.edu/LAWLIBRARY/getattachment/10571998-93ea-46b8-8bfd-859b21121708/JUVENILE-OFFENDERS-ACT.aspx>.
- Juvenile Offenders Act. "Guyana," 1931. Retrieved from <http://guyanese lawyer.com/lawsofguyana/Laws/cap1003.pdf>.
- Juveniles Act. St. Vincent and the Grenadines, 1952.
- Katz, C. M., and H. Cheon. *Evaluation of the Family Matters Program*. Phoenix: Arizona State University, 2020.
- Katz, C. M., and A. M. Fox. "Risk and Protective Factors Associated with Gang-Involved Youth in Trinidad and Tobago." *Revista Panamericana de Salud Pública* 27, no. 3 (2010): 187–202.
- Katz, C. M., E. R. Maguire, and D. Choate. "A Cross-National Comparison of Gangs in the United States and Trinidad and Tobago." *International Criminal Justice Review* 21, no. 3 (2011): 243–262.

- Laurent, B., A. Barnes, T. Chambers, and S. Gray. "Caribbean Basin Security Initiative Juvenile Justice Assessment." USAID Barbados, 2011. Retrieved from <https://democracyinternational.com/media/Caribbean%20Basin%20Security%20Initiative%20Juvenile%20Justice%20Assessment.pdf>.
- Leslie, D. L. "Reassessing Conditions of 'Prison' in Jamaica." *International Conditions of "Prison" in Jamaica* (2020). <https://doi.org/10.1177/1057567720922283>.
- Loop News. "St Michael's Home for Boys Closes Down after 129 Years of Operation." *Loop News*, May 2, 2018. Retrieved from <https://www.looptt.com/content/st-michaels-home-boys-closes-down-after-129-years-operation>.
- Maguire, E. R., and D. H. Fishbein. "The Influence of Family Characteristics on Problem Behaviors in a Sample of High-Risk Caribbean Adolescents." *Family Relations* **65**, no. 1 (2016): 120–133.
- Maguire, E. R., W. Wells, and C. M. Katz. "Measuring Community Risk and Protective Factors for Adolescent Problem Behaviors: Evidence from a Developing Nation." *Journal of Research in Crime and Delinquency* **48**, no. 4 (2011): 594–620.
- OAS. "High Authorities for Penitentiary Policies of OAS Member States Call for the Humanization of Prison System." *Press Release*, February 6, 2020. Retrieved from https://www.oas.org/en/media_center/press_release.asp?sCodigo=E-006/20.
- Rediker, E.. "Courts of Appeal and Colonialism in the British Caribbean: A Case for the Caribbean Court of Justice." *Michigan Journal of International Law* **35**, no. 1 (2013): 213–251. Retrieved from <https://repository.law.umich.edu/mjil/vol35/iss1/6/>.
- Reformatory and Industrial Schools Act. "Barbados," 1926. Retrieved from <http://104.238.85.55/en/ShowPdf/169.pdf>.
- Sarsfield, R., and M. Bergman. "Study of Inmates in Guyana." Center for Latin American Studies on Crime and Violence (CELIV), UNTREF, Inter-American Development Bank (IADB), 2017. Retrieved from <http://citizensreportgy.com/wp-content/uploads/2018/05/Guyana-Inmate-Study.pdf>.
- Seepersad, R. Survey of Individuals Deprived of Liberty: Caribbean 2016–2019, Trinidad and Tobago Country Report, edited by D.M. King, V. Velez-Grajales, and L. Marmolejo. Washington, D.C.: Inter-American Development Bank, 2020.
- Smith, A., J. Chein, and L. Steinberg. "Impact of Socio-Emotional Context, Brain Development, and Pubertal Maturation on Adolescent Decision-Making." *Hormones and Behavior* **64**, no. 2 (2013): 323–332.
- Summary Courts Act. "Trinidad and Tobago," 1918. Retrieved from https://rgd.legalaffairs.gov.tt/laws2/Alphabetical_List/lawspdfs/4.20.pdf.
- Tindigarkayo, J. K., D. L. Leslie, and N. Thwaites. External Evaluation of "A New Path": Promoting a Healthy Environment and Productive Alternatives for Juvenile Remandees and Offenders in Jamaica. Organization of American States, 2019. Retrieved from http://portal.oas.org/en/saf/accountability/docs/ANewPath_Final_Dec2019.pdf.

- Training School Act. "Guyana," 1907. Retrieved from <http://guyaneselawyer.com/lawsofguyana/Laws/cap1106.pdf>.
- UNDP. "Caribbean Human Development Report 2012", 2012.
- U.S. State Department. "2019 Country Reports on Human Rights Practices: Saint Vincent and the Grenadines." Bureau of Democracy, Human Rights, and Labor, 2019. Retrieved from <https://www.state.gov/reports/2019-country-reports-on-human-rights-practices/saint-vincent-and-the-grenadines/>.
- Vanderbilt University. "Latin American Public Opinion Project (LAPOP)." Retrieved from <https://www.vanderbilt.edu/lapop/>.
- Wallace, R., and K. Wylie. "Changing on the Inside: Restorative Justice in Prisons: A Literature Review." *International Journal of Bahamian Studies* **19**, no. 1 (2013): 57–69.
- Wallace, W. C., B. Hill, and A.R. Rosales. "Remanded in Custody and Punished Without Trial; The Caribbean Justice System and Remand Populations in Trinidad and Tobago." *Justice Policy Journal* **17**, no. 1 (2020): 1–28.
- WHO. "Homicide Rate," 2015. Retrieved from <https://apps.who.int/violence-info/homicide/>.
- WIC News. "St Kitts-Nevis Youth to Benefit from Implementation of Child Justice Act." *WIC News*, October 2, 2019. Retrieved from <https://wicnews.com/caribbean/st-kitts-nevis-youth-benefit-implementation-child-justice-act-225122480/>.
- Williams, D, L. Hoffman, D. Sabet, C. Caligan, and M. Feenstra. "Evaluation of Juvenile Justice Sector Reform Implementation in St. Lucia, St. Kitts and Nevis, and Guyana: Baseline Report." USAID, 2018. Retrieved from https://pdf.usaid.gov/pdf_docs/PA00T1BS.pdf.
- Williams, M. C. "Cabinet Approves New Juvenile Justice Bill." *Barbados Today*, 2019. Retrieved from <https://barbadostoday.bb/2019/05/25/cabinet-approves-new-juvenile-justice-bill/>.
- World Prison Brief. Retrieved from <https://www.prisonstudies.org/>.

Policy Note

Performance Measurements – The Cartwheels of the Modern Court System

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Abstract

The purpose of this study was to establish a comprehensive framework for the statistical measurements of the performance of the court systems. This 3-year study relied on a combination of observations, unstructured interviews and statistical data, which were administered in several court locations, business lines and jurisdictions, supplemented by evidence from other countries. The result is the compilation of fifteen statistical measurements classified into two broad but complementary categories, namely, productivity metrics and time lag metrics. Together, these metrics provide a wide-ranging means for monitoring and evaluating court performance. This study found that the application of scientific methods to quantify and track court productivity is an essential facet of modern court management and that the careful application of specific mixes of productivity metrics are vital to establishing a comprehensive profile of judicial performance which will inform critical policy interventions to enhance the efficient delivery of justice.

Keywords: Productivity; Efficiency; Resources; Time; Decisions.

Introduction

The use of statistical measures to assess judicial performance and the efficiency of courts is a relatively new and understudied area. It is not until the last three decades that the interest in quantitative law and the measurement of court efficiency started to grow with influential work by authors such as Lagrand (1999) in his publication on comparative legal studies in which he explored measurements of court output and targets as an important facet of fashioning judicial processes, a furtherance of the groundbreaking 1979 Merryman Report. Kelitz (2002) in his exposition on why courts need performance standards is another important contributor to the early work in quantitative law. Much of the study of

court systems and the judiciary before that time was focused on qualitative assessments. The use of statistics as both a measuring and a monitoring tool for court and judicial performance provides an objective avenue through which courts can monitor and evaluate the efficiency and effectiveness with which their responsibility to the public is being discharged. The Jamaican court system, like many others across the world, in particular in the developing world has suffered from a dearth of statistics to guide judicial reforms and to monitor performance, both historically and contemporarily. Such dearth often impaired the ability of judiciaries to successfully diagnose weaknesses in judicial processes and to effect the interventions, which are necessary to attain the most optimal and sustainable outcomes. For example, without the necessary metrics, a trial court wanting to improve the trial date certainty and, thus, improve the rates of disposition and the timely delivery of justice to the public is unable to achieve the most efficient outcomes. As the wheels are vital in giving both direction and buttress to the cart, so are statistical measures to the modern, accountable court system.

Materials

Although the discipline of court statistics and quantitative law is relatively new, a number of studies have emerged in recent time, which have focused on court performance, leading to a preponderance of work emphasizing the importance of data and statistics in monitoring, evaluating and influencing judicial performance. In their exposition on the global measures of court performance, the IFCE (2017, 1) offered an important pivot for this argument by purporting that:

A foundation stone of excellent court planning and performance is the maintenance of accurate, comprehensive and reliable information and databases. It is essential, not only to assessing the performance of a court but also to assessing whether its strategies or activities for improvement are having a positive effect.

Indeed, more and more court systems across the world are relying on statistical data as the basis of informing operational interventions and policy design, which are necessary to efficiently align resources in their judicial systems and to re-engineer case process flows with a view to reducing delays and expediting the timely delivery of justice to citizens (Kelitz 2002). In his assessment of the guiding principles of trial court performance standards, Keilitz (2002) offers four reasons why courts should focus on consistent, scientific performance management. The first of these reasons, the author argues, is based on the notion that courts are

foremost accountable for their performances and for the benefits they attain. Second, he argues that courts should be operated and managed with a definitive focus on the people who are being served by it rather than those operating the court. He further argues that courts are vital facets of the governance of communities and the citizens in their jurisdiction and must thus seek to contribute positively to social order through the timely and fair delivery of justice. The author anchors his four-point argument by highlighting that courts are complex public organizations whose functions are much more than simply judges hearing and resolving cases. He argues that this importance renders the court as an entity which must be managed in a responsible way and whose allotted resources must be marshalled in the most optimal way possible.

The aim of this article is to summarize and propose a series of inter-related quantitative measurements, which can be effectively used to assess the needs of courts and court performance and potentially form the basis for assessing the efficiency of judicial systems worldwide. These measures represent an amalgamation of reviews of the metrics used in various jurisdictions and new augmentations resulting from insights gleaned from a 3-year study of and work in the Jamaican court system, which spanned August 2016 through July 2019. The Jamaican court system uses common law, is the largest and most diverse in the English-speaking Caribbean, and thus offers provides a solid case for the rigorous and comprehensive framework needed for this type of study. It is one of the few studies that successfully articulates such an extensive range and blend of measurements. It further represents a profound step in the evolution of quantitative law, once a lonely outpost when John E. Merryman published the Merryman Report in 1979, the groundbreaker for the application of mathematical quantifications to the study of court performance.

Method

In seeking to fulfil the objective of establishing a set of reliable, interrelated measures, which can be effectively applied in evaluating and assessing court needs and court performance, the study draws on measurement approaches from various studies reviewed. These are supplemented by a range of additional metrics derived from insights gleaned from 3 years of studying and working in the Jamaican court system.

This study spanned the period August 2016 to July 2019 and involved extensive reviews of all business lines in the Jamaican court system at all jurisdictional levels as well as ongoing statistical reporting. The reviews

were carried out using a combination of observation and unstructured interviews. The observations were administered periodically over 3 years by scrutinizing the proceedings of various types of court hearings at several stages in the case progression continuum and by examining the processes involved in preparation of cases for court in several case types, both pre- and post-court. Over 50 open-court proceedings and 70 observations of pre- and post-court preparatory work across courts and jurisdictions in Jamaica were surveyed over a 3-year period. The unstructured interviews administered over the period were done with over 100 staff members at various levels and across different jurisdictions, including judges, the information technology professionals, court administrators, deputy registrars, supervisors, assistant and deputy clerks of court and data entry officers. The results of the observations and unstructured interviews were documented and sequenced over the period. The consequence of this extensive work has been the implementation of a data entry apparatus in most Jamaican courts, the development and deployment of electronic data systems throughout the courts and the creation of a reliable and consistent system of statistical reporting. The amalgam of this work has led to the harnessing and development of fifteen statistical measurements, which are discussed later.

Fifteen measures are subdivided into two primary categories, namely, productivity/efficiency measurements and time lag measurements. A list of fifteen measures subdivided by measurement category is outlined below, and the technical and operational details of which will be presented in the subsequent sections of the article.

Productivity metrics	Time lag metrics
1) Judicial carriage/pending caseload	1) The on-time case processing rate
2) The case clearance rate	2) The gross case backlog rate
3) The case disposal rate	3) The net case backlog rate
4) The case congestion rate	4) The case turnover rate
5) The hearing date certainty rate	5) Estimated disposition time for unresolved cases
6) The trial date certainty rate	6) The average time taken to dispose of cases
7) The case file integrity rate	7) Case age rate
8) The courtroom utilization rate	

The productivity measurements are so called because they are either in a direct or in an indirect way associated with the progression of cases through the court system. Such measurements, therefore, examine issues of the reliability of scheduled court dates and issues surrounding caseload management. They provide important insights into how well courts are doing in managing their caseload and case backlog and in resolving cases. The time lag measurements address the effectiveness of courts in resolving cases in a timely manner and in executing the events necessary to guarantee such outcomes. Importantly, these measures provide a good indication of the extent to which the actions of the court are contributing to backlog reduction.

The study will systematically explore and outline the concepts and applications surrounding each measurement as it seeks to produce a comprehensive list of court metrics. Reference will also be made to actual court statistics derived from the Jamaican court system, which is seen as one of the fastest advancing judicial systems in the Caribbean region at the moment.

Results and Discussions

This section of the paper will provide a description and discussion of the productivity and time lag metrics identified in the methodology section. The interpretation and application of these measures will be explored within the context of the broad implied objective of courts and judicial systems to expeditiously deliver justice to its citizens. No single metric or subset of metrics should be examined in isolation to draw wholesale conclusions and generalize. Instead, each measure acts as small part of the overarching analytical tool, which should include several related measurements at any given time. Any analysis of court productivity for example must include all the productivity metrics and some time lag metrics – it all depends on the objectives of the assessment being carried out. Thus, to effectively apply the range of measurements in analysing courts requires a solid understanding of the various types of metrics and what they seek to accomplish. Any effort to assess the efficiency of court operations and how well a court is managing its caseload and case backlog must take into account the full range of productivity and time lag measures. Since this is a core objective of any judicial system, the simultaneous application and interpretation of the measures under these categories are, therefore, critical. Important insights on court efficiency and resource use can also, however, be derived from the two other

resource categories, which may be viewed as supplementary to the productivity and time lag measurements.

In this section, there will first be a discussion of the use, application and interpretation of the productivity metrics, followed by a related discussion of the time lag metrics. A number of the metrics presented are also accompanied by an assessment of how specific measurements can be seamlessly used in tandem to offer quick, surgical guidance on the state of courts and, thus, inform the interventions, which are necessary to improve performance and output while assuring the efficient resolution of court cases. It must be pointed out that most of these measurements have broad application to all case types and business lines in the court system, though a few are specifically tailored for specific types of matters.

Productivity metrics

The judicial carriage/pending caseload

Any serious effort to effectively mobilize and husband resources in a court cannot take place void of comprehensive knowledge of the judicial carriage or pending caseload which is carried by individual courts and the court system as a whole for various business lines in any jurisdiction. The pending caseload should be computed as the sum of all incoming cases, which includes both new filings and reopened cases. A clearer prescription could, however, be proposed where the pending caseload is expressed as the sum of all active cases brought forward, new case filings and reopened cases. Cases can be classified into one of four possible statuses – namely, active cases which are cases that have a future date set for a court hearing or are awaiting the completion of a routine action for a date to be assigned; disposed cases which are cases resolved; inactive cases which do not have a future date of court appearance because they are awaiting some open-ended action; and reactivated or enforced cases which usually refers to civil cases on which applications have been made to enforce or vary a judge's order. The stock of reopened cases which should be included in counting the pending caseload are those which were made inactive by the issuance of bench warrants or other event which requires that some action be undertaken outside of the court's direct influence to return the matter to court. A bench warrant, which is ordered by a judge, requires, for example, execution by the police in order to be brought back to court. Thus, strictly speaking, the pending caseload speaks to cases for which hearing dates are set or being set or in other words the stock of

active cases before the court. Therefore when a case becomes inactive, strictly speaking it is not a part of the court's pending caseload, but neither is it disposed or resolved. With this in mind, inactive cases such as matters on which bench warrants are ordered but not executed and *nolle prosequi* are not strictly a part of the pending caseload but neither are they disposed. If or when inactive matters are brought back before the courts, they should be regarded as reopened cases because technically at the point of becoming inactive they may be administratively classified as closed, awaiting further action, which is not within the court's direct sphere of influence. As far as reactivated/enforced cases are concerned, these are a distinct category of cases, which were already disposed but are now involved in a new set of proceedings before the court to enforce or vary an existing order. Such matters may not be treated as a separate reporting category, affecting the new case counts or the reopened case counts since austere speaking they would have already been factored into the stock of disposed cases. Reporting on such enforcements as a separate, post-disposal case activity is, therefore, prescribed to avoid any confusion or double counting. From the ensuing, therefore, it is proposed that in computing the pending caseload of a court, we include all active cases brought forward, new cases filed in the courts for the first time which are unrelated to enforcing or varying an existing court order on a disposed case as well as cases that were inactive and thus administratively classified as temporarily closed but are now being returned to court. The formula is stated below:

$$\begin{aligned} \text{Pending caseload} &= \text{Active cases brought forward} \\ &+ \text{new case filings} + \text{reopened cases} \end{aligned}$$

This scenario can provide a simple illustration of this computation – 100 new cases are filed in a given year, 80 active cases were brought forward and 20 cases were returned to court because bench warrants were executed. If none of these cases were disposed at the end of the year, then the pending caseload would be 200 cases (100+80+20). If some of these cases were disposed during the year, then the pending caseload at the start of the next year would be 200 less the number of cases disposed during the year. The ideas proposed here are generally consistent with the international best practices and prescriptions.

As an example from the Jamaican court system, the Supreme Court had 24,939 active unresolved cases brought forward at the beginning of 2020. The expected number of new cases to be filed in 2020 is 13,500 and the forecasted number of inactive or disposed cases which will be

reopened is 1,235. Thus, the pending caseload of the Supreme Court in 2020 is expected to be 37,204 cases. With the Supreme Court expected to dispose of 8,000 cases in 2020, the pending caseload at the beginning of 2021 is expected to show an increase. Reducing the pending caseload requires bolstering the case clearance rate above 100 per cent, a quantitative target which is an important part of the chief justice's vision for the ensuing years.

Case disposal and case clearance rates

The next set of productivity measurements to be discussed is the case disposal rate and the closely related case clearance rate. The case disposal rate speaks to the proportion of new cases filed in a given year which are disposed in the same year; while the case clearance rate speaks to the ratio of incoming to outgoing cases within a specific period of time. The case clearance rate is one of the most vital measurements of court productivity, providing a wide range of insights into the efficiency of court operations and of potential problems in case management. The case disposal rate is important from the perspective that it provides an indication of the rate at which new cases filed are being resolved, which in turn has implications for the clearance rate. Improvements in the case disposal rate are generally expected to translate into higher clearance rates. Since the case clearance rate is a measurement of the ratio of incoming to outgoing cases, then a court with a backlog problem must consistently exceed a clearance rate of 100 per cent, which would suggest that it is disposing of more cases than the number of incoming cases. If such a court sustains a backlog rate of under 100 per cent long enough, then its backlog stock and rate will invariably worsen. A court without a backlog problem to begin with will build a backlog if it maintains a case clearance rate of consistently fewer than 100 per cent. A court which maintains a case clearance rate of fewer than 90 per cent, but especially fewer than 80 per cent, will build-up a severe backlog over time. Courts, which maintain a case clearance rate of 100 per cent, are keeping up with their backlog since they would be disposing of as many cases as the number of new cases being filed. Consistently exceeding a 100 per cent clearance rate is, however, necessary to reduce and ultimately eliminate the case backlog. Against this background, a court, which does not have an acute backlog stock, will be able to operate efficiently in managing its current caseload and in reducing its case backlog progressively if it is between 90 per cent and 115 per cent clearance rate consistently. Sustaining such a band long

enough and consistently will see a court largely operating as virtually backlog free.

The formulae for the case disposal and case clearance rates are as follows:

Disposal rate

$$= \frac{\text{Number of cases disposed in period X (out of the stock of incoming cases)}}{\text{Number of incoming cases in period X}} \quad (1)$$

Clearance rate

$$= \frac{\text{Number of cases disposed in period X (regardless of the date of case origin)}}{\text{Number of incoming case in period X}} \quad (2)$$

Since the case clearance rate takes into account all cases disposed in a particular period regardless of the date of origin, it is expected to be greater than or equal to the case disposal rate (i.e. case clearance rate \geq case disposal rate). The disposal rate only takes into account the stock of cases disposed from those incoming cases, which were filed in the same period. For example, in the Jamaican Parish Courts in 2018, a total of 27,567 incoming cases were filed. Of this number, 19,550 cases were classified as disposed, leading to a case disposal rate of 70.92 per cent (Supreme Court of Jamaica 2018). At the same time, a gross figure of 25,999 cases were classified as disposed in the period, including aged cases which were brought forward at the beginning of the year. Thus, the case clearance rate was 94.31 per cent for 2018. Given that the Jamaican court system has a backlog of criminal cases, this rate of 94.31 per cent though commendable falls below a minimum rate of 100 per cent, which would be required under the circumstances to reduce the criminal case backlog. The chief justice of Jamaica has set out a targeted case clearance rate of 130 per cent for the Jamaican court system over a 6-year period leading up to 2025, a rate that is pivoted against the objective of making significant inroads in the pre-existing case backlog (Supreme Court of Jamaica 2018).

The calculation of the clearance and disposals rates outlined above is shown as follows:

$$\text{Clearance rate} = \frac{25,999}{27,567} * 100 = 94.31 \text{ per cent}$$

$$\text{Disposal rate} = \frac{19,550}{27,567} * 100 = 70.92 \text{ per cent}$$

One matter to be clarified in the computation of the disposal and clearance rates is the inclusion of inactive cases in the denominator of the formulae, which are added to the stock of resolved cases. The rationale behind this approach is that such inactive cases are so rendered largely because of factors, which are outside of the court's direct control, such as awaiting the execution of a bench warrant by the police. Such matters may, therefore, be administratively classified as "temporarily closed" and thus included in the denominator of the computations, thereby giving a fairer measurement of case activity in the courts.

In the Jamaican court system in 2018, a total of 27,567 new criminal cases were filed while 19,550 of those became either disposed or inactive, thus producing a case disposal rate of 70.92 per cent, suggesting that for every 100 new cases that were filed in 2018, 74 were disposed. In 2019, the output for criminal cases in the parish courts was quite similar with 26,771 new cases filed and 19,743 of these becoming inactive or disposed, thus producing a case disposal rate of 73.75 per cent. For the Supreme Court of Jamaica, 1,614 of the 13,116 new cases filed in 2019 were disposed, resulting in a case disposal rate of 12.31 per cent. In 2018, a total of 12,897 new cases were filed at the Supreme Court, of which 1,336 were disposed. This resulted in a case disposal rate of 10.36 per cent, 1.95 percentage points lower than 2019.

In terms of the case clearance, in 2018, a total of 8,564 cases were disposed in the Supreme Court of Jamaica, producing a case clearance rate of 66.40 per cent. In 2019, in all 7,727 cases were disposed at the Supreme Court, resulting in a case clearance rate of 58.91 per cent, which is 7.49 percentage points lower than that in 2018. In the criminal division of the Jamaican parish courts, 27,189 cases either became inactive or were disposed in 2019, producing a case clearance rate of 101.60 per cent. In 2018, 25,999 cases in the criminal division of the Jamaican parish courts became inactive, producing a case clearance rate of 94.31 per cent, which is 7.29 percentage points lower than that in 2019.

The case congestion rate

Another crucial productivity metric is the case congestion rate. This metric seeks to measure the extent to which a court is keeping up with its case-load, based on its implied state of resources and rate of clearance. The case congestion rate is calculated as follows:

$$\text{Case congestion rate} = \frac{\text{Pending cases} + \text{incoming cases filed}}{\text{Disposed cases}} \quad (3)$$

Pending cases include cases brought forward at the beginning of the applicable period, incoming cases include new filings and reopened cases while disposed cases include all resolved cases and inactive cases awaiting some action to return to court at a future date.

A court with a case congestion rate of 100 per cent is deemed to be keeping pace with its "case traffic", that is, the number of cases disposed is keeping pace with the stock cases that are actively before the court. In particular, it suggests that the court's existing clearance rate is at an optimal point and that the implied state of resources of the court is being optimally mobilized. If the case congestion rate falls below 100 per cent, then it suggests that the particular court has spare capacity, which creates an opportunity for resources to be repurposed to other areas of court operation. A rate exceeding 100 per cent would mean that the court's caseload exceeds what its implied state of resources and rate of clearance would suggest. The case congestion rate provides vital insights into the ability of courts to keep up with their caseload obligations. In this regard, a case congestion rate of over 100 per cent may imply that a court is simply ill-equipped with the resources needed to operate at its highest level of efficiency. Alternatively, and simultaneously, it could mean that a court is not achieving its optimum potential as far as clearance and disposal rates are concerned. Thus, the case congestion rate should be interpreted alongside the clearance rate and other resource usage rates such as the courtroom utilization rate in order to garner the most meaningful interpretation and inform appropriate policy interventions. For example, a court, which has a high case congestion rate but low clearance and courtroom utilization rates, must take a very serious look at its case management and scheduling practices as well as its general administration to identify areas of weaknesses and undertake the appropriate interventions. At the start of 2018, the pending criminal caseload (active cases), using cases originating since 2016, in the non-specialized parish court jurisdiction in Jamaica was 5,577. In all, 27,567 incoming cases were filed while 21,749 cases were disposed and another 4,250 became inactive (Supreme Court of Jamaica, 2018).

Hence, the case congestion rate in these courts for 2018, applying the formula above would be:

$$\text{Case congestion rate} = \frac{5,577 + 27,567}{21,749 + 4,250} * 100 = \frac{33,137}{25,999} * 100 = 127.45 \text{ per cent}$$

This result of 127.45 per cent suggests that these courts are carrying 27.45 per cent more cases than their current resource capacity and rate of clearance seem to suggest. Before drawing diagnostic conclusions, however, it would be necessary to explore the case clearance as well as the courtroom utilization rate. The clearance rate of 94.31 per cent computed earlier suggests that the courts are doing fairly well in moving cases out of the court system. If further analysis of the courtroom utilization rate were to reveal low rates of usage, then it would mean that there is capacity for even higher case clearance rates and thus a clear opportunity to reduce case congestion through improved scheduling and case management practices. If, on the other hand, it were to be found that the courtroom utilization rate is high and meets the required standards, then it would be a clear indication that a greater quantum of resources or more efficient resources should be contemplated, possibly more courtroom space. The case congestion rate is one of several measurements of the efficiency of court administration and demand on the court system. When complimented by an assessment of the clearance and disposal rates as well as resource measurements like the courtroom utilization rate, it becomes a potent measurement of court efficiency.

The hearing date certainty rate and the trial date certainty rate

Another set of important court productivity metrics are the hearing and trial date certainty rates. The hearing date certainty rate refers to the probability that dates set for various types of court hearings in a given period will proceed on schedule without delay. Such hearing dates vary depending on the particular case type or business line in the courts but will generally include mention dates, plea and case management dates, trial dates, bail application dates, dates set for the hearing of various applications for relief sought, part-heard, sentencing, and judgement delivery dates. If, for example, a civil court sets five trial dates, seven dates for delivering outstanding judgements and twenty-three dates for various applications to be heard in a given period and it turns out that three trial dates, 10 applications and 2 judgement dates started on schedule without being delayed to another date, then the overall hearing date certainty rate for this civil court would be $\frac{3+10+2}{23+7+5} * 100 = \frac{15}{35} * 100 = 42.86$ per cent. In other words, the hearing date certainty rate is computed using the formula:

$$\frac{\text{Number of hearing dates set which started on schedule in period X}}{\text{Total number of hearing dates set in period X}}$$

(4)

Alternatively, it may be computed as:

$$\frac{\text{Number of hearing dates set in period X} - \text{the number of hearing dates adjourned in period X}}{\text{Total number of hearing dates set in period X}} \quad (5)$$

A further alternative method of computing the trial date certainty rate is that prescribed by the IFCE (2017), which proposes that it may be computed as the ratio of the number of cases with no more than the prescribed or targeted sittings and the total number of closed trial cases. This should produce roughly the same outcomes as the formulae outlined.

The figure of roughly 43 per cent computed above is an indication that in the applicable period, there was a 43 per cent chance that a hearing date set would commence on schedule without adjournment. An analysis of hearing date certainty by date type can be a very instructive tool in determining the areas of weaknesses in a court's scheduling and case management apparatus. A court for example which has a low hearing date certainty rate may simply be setting too many hearings for given period of time, given its resource and time limitations and the state of readiness of case files.

The trial date certainty rate, as implied, is a subset of the overall hearing date certainty rate. It speaks specifically to the probability that dates set for trials to start actually proceed on schedule without being delayed to a future date. As with the overall hearing date certainty, the trial date certainty rate provides essential insights into the effectiveness of case management practices and the precision of the science that is applied in scheduling cases. It should be noted that simply reducing the number of trial dates set is not a fix for a low trial date certainty rate; rather setting a more realistic number of trials in a given period should be coupled with strong case management practices and procedures in order to attain the desired outcomes. A higher trial date certainty suggests that a court is using judicial time more productively, thus improving the probability that cases will be heard and disposed of in shorter times and inspiring public confidence in the court system. In Jamaica, the chief justice has set a target of an overall 95 per cent trial date certainty rate across the court system, to be attained by 2025. This means that by 2025, 95 of every 100 trial dates set should be starting on schedule without adjournment (Supreme Court of Jamaica, 2018). This target hinges on the established correlation between higher trial date certainty and courts that are more productive, which have higher clearance and disposal rates. The formula

for computing trial date certainty rate is similar to that used for the overall hearing date certainty rates, as expressed follows:

$$\frac{\text{Number of trial dates set which started on schedule in period X}}{\text{Total number of trial dates set in period X}} \quad (7)$$

Alternatively, it may be computed as:

$$\frac{\text{Number of trial dates set in period X} - \text{the number of trial dates adjourned in period X}}{\text{Total number of trial dates set in period X}} \quad (8)$$

Low trial and hearing date certainty rates could be associated with low courtroom utilization and higher case congestion rates and is thus be viewed as a supplementary ratio in assessing court productivity. For example, a court with a low trial and hearing date certainty will have a low proportion of cases starting on the scheduled dates, thus possibly low courtroom utilization rates and a build-up of pending cases leading to higher case congestion rates and overall a less productive court.

In the criminal division of the parish courts of Jamaica in 2018, of every 100 dates set for trial 81 proceeded without the date being adjourned, thus producing a trial date certainty rate of 81 per cent. This figure slipped to 70 per cent in 2019, a fall of 11 percentage points when compared to 2018. In the Supreme Court of Jamaica, 51 of every 100 trial dates set were adjourned in 2019, leading to a trial date certainty rate of 49 per cent. This was down from a trial date certainty of roughly 56 per cent in 2018. As far as the hearing date certainty is concerned, roughly 73 of every 100 hearing dates set went ahead without adjournment in 2018, but the figure dipped to roughly 59 in 2019, a fall of 14 percentage points (Supreme Court of Jamaica, 2019).

The case file integrity rate

The seventh court productivity metric is that of the file integrity rate. This provides a measurement of the probability that a case will not be adjourned because of any of the following factors: missing/lost files, incomplete files or untimely location of files. Case files, which are associated with cases scheduled for court, should be in a state of completeness, with all requisite documents properly filed and statements in place for the case to proceed. In the absence of such readiness or a fairly high probability of readiness within the required time, scheduling cases associated with such case files invariably results in a wastage of judicial

time. Case files scheduled for court should also be retrieved and made available for court in a timely manner and be properly listed for court. A low to zero incidence of case adjournments resulting from files missing/lost, incomplete or not located in a timely manner will contribute positively to the productive use of judicial time, potentially improving disposal and clearance rates and reducing the overall average time taken to dispose of cases. The case file integrity rate may be computed as follows:

Case file integrity rate=

$$\frac{\text{Total number of cases scheduled} - \text{Number of cases adjourned due to missing late or incomplete files}}{\text{Total number of cases scheduled}}$$

*100

(9)

As an illustration, if in a given year, 1000 court hearing dates are set which require the use of case files and 200 of these appointments were not able to commence due to case files being missing, otherwise unavailable or incomplete, the case file integrity rate would be $\frac{1000-200}{1000} * 100 = 80$ per cent. This means that there is an 80 per cent probability that a case will start or commence without delay or adjournment resulting from any of the named circumstances. A low case file integrity rate is a function of internal deficiencies in the administrative and case management processes in a court. The timely location, availability and completeness of a case file could be by way of manual or electronic facilities or both. In any case, the court's registry has an enormous responsibility to ensure that all actions, which are within its powers, are executed to ensure that the use of judicial time is optimized and that the mechanism used to schedule cases is a science and not just an art. In the criminal divisions of the Jamaican parish courts, the case file integrity rate in 2019 was 93.40 per cent, up from 91.04 per cent in 2018, an increase of 2.26 percentage points. In the Supreme Court of Jamaica, the corresponding 2019 case file integrity rate was 91.04 per cent, a fall of 3.41 percentage points when compared to the 94.45 per cent recorded in 2018 (Supreme Court of Jamaica, 2019).

The courtroom utilization rate

The courtroom utilization rate is an important indicator of the efficiency with which the physical courtroom space in a court is being utilized. It is vital supplementary metric in analysing the case clearance and case congestion rates and thus court performance. The courtroom utilization rate is calculated as the proportion of time available for court to be sitting

which is actually utilized. Thus, for example, if a courtroom has six available hours for courtroom sitting each day and four of those hours are utilized either for direct open-court activity or in chamber discussions or consultations related to the case, then the courtroom utilization rate would be calculated as:

$$\frac{\text{Proportion of available time for count sittings which are actually utilized}}{\text{Total time available for count sittings}} \times 100 = \frac{4}{6} \times 100 = 67 \quad (10)$$

It is important to point out that the number or the proportion of available court time which is actually utilized speaks to both open-court usage and tangential out-of-court engagements which judges carry out, such as breaks to have brief discussions in chamber which are relevant to the continuation of the matter. A persistently low courtroom utilization rate may be as much a symptom of poor case management practices and weaknesses in the case scheduling apparatus as it is of the unpredictable events that may happen on any court date. A low courtroom utilization rate is expected to be correlated with lower case disposal and case clearance rates and higher case congestion rates. A high courtroom utilization rate, which correlates with high case clearance and case disposal rates while case congestion rate remains high, may be an indication that additional courtroom space and supporting judicial resources are needed. Any serious assessment of court productivity must, therefore, take account of these productivity metrics as well as some time lag measures. In the Jamaican parish courts, the courtroom utilization rate for 2019 was 59.85 per cent, up from the 58.15 per cent recorded in 2018, a change of 1.7 percentage points. In the Supreme Court of Jamaica, the estimated average courtroom utilization rate across both years was 55.30 per cent (Supreme Court of Jamaica, 2019).

The time lag metrics

The time lag metrics are useful tools in analysing the actual and expected length of time that cases stay in the court system before being disposed or resolved as well as factors that may contribute to cases being delayed in the court system. The time lag metrics are especially useful in supplementing the court productivity measures when analysing court performance for policy intervention purposes.

The on-time case processing rate

The on-time case processing rate is a metric that is used to quantify the proportion of cases disposed within the prescribed time standards. The prescribed time standards for the disposition of cases vary depending on the case type or case subtype, but most court systems will have a general timeline within which cases, regardless of the type and complexity, will be disposed. This timeline tends to range from 2 to 5 years depending on the jurisdiction and the guiding principles and applications in law; however, there may be specific case types, which are expected to be disposed well within the overarching maximum prescribed time to disposition and are thus measured by such standards. The overarching on-time case processing rate for a court is computed as follows:

On-time case processing rate=

$$\frac{\text{Number of cases disposed within the prescribed time standards in period X}}{\text{Total number of cases disposed in period X}} \times 100 \quad (11)$$

Alternatively, the on-time case-processing rate may be computed as:

$$1 - [\text{case backlog rate}] \quad (12)$$

For example, if 1000 cases are disposed in a given year, and 400 of those cases were disposed within a maximum prescribed time for disposal of cases of 2 years, then the on-time case processing rate would be $(400/1000) \times 100 = 40$ per cent. Alternatively, since 600 or 60 per cent of the cases took more than the prescribed 2 years to be disposed, the case backlog rate would be 60 per cent, hence the on-time case processing rate would be $1 - 0.60 = 0.40$ or 40 per cent. The on-time case-processing rate provides a reliable and simple tool for tracking how well a court is doing in meeting time disposal targets as well as to monitor operational interventions aimed at improving such outcomes. The on-time case-processing rate is directly affected by the case clearance rate such that higher case clearance rate will generally be associated with lower times to disposition and hence higher on-time case disposition rates.

In 2019, the Supreme Court of Jamaica recorded an on-time case processing rate of 69.11 per cent across its divisions, suggesting that roughly 69 in every 100 cases disposed in that year were resolved in 2 years or under. This figure represented an improvement of 2.08 percentage points when compared to 2018 which recorded an on-time case processing rate of 67.03 per cent. In the parish courts of Jamaica (excluding the traffic

courts), the estimated on-time case processing rate in 2019 was 71.81 per cent, suggesting that roughly 72 per cent of cases disposed in 2019 were resolved within 2 years. This was an improvement over the 70.15 per cent recorded in 2018 (Supreme Court of Jamaica, 2019).

Gross and net case backlog counts

In discussing the computation of the pending caseload, the distinction between active, inactive and disposed cases was forwarded. The gross backlog may be used to describe the sum of all active and inactive cases, which have been unresolved in the court system for more than the prescribed maximum length of time for all case types to be disposed, for example, 2 years. The net backlog, on the other hand, excludes inactive cases from this computation, including only active pending cases before the courts. As a whole, the backlog rate is, therefore, the proportion of all cases disposed in a given period (typically a year) which were resolved outside of the prescribed maximum time standard for disposal of cases. The gross backlog gives a more complete picture of the quantity of unresolved cases before the courts, but it also unfairly classifies and counts a quantum of cases as backlog, which are awaiting actions, which are not directly within the court's control. For example, when a bench warrant is issued, it has to be executed by the law enforcement authorities in order for the matter to come back before the courts. The formulae for both backlog counts and the overall backlog rate are enumerated as follows:

$$\begin{aligned} \text{Gross case backlog} &= \text{Active cases at the end of} \\ &+ \text{Inactive cases at the end of period X} \end{aligned} \quad (13)$$

$$\text{Net case backlog} = \text{Active cases at the end of period X} \quad (14)$$

Backlog rate

$$= \frac{\text{Number of cases disposed outside the prescribed time period in period X}}{\text{Total number of cases disposed}} \quad (15)$$

In many court systems across the world, when cases become inactive they are excluded from the list of pending cases and from the court's backlog. In fact, their case age also stops counting, until the matter returns to court.

The case backlog counts, particularly in net and the backlog rate, are important in assessing the extent to which courts are delivering justice in a timely and efficient manner. The old adage that justice delayed is justice

denied is extremely pertinent to the courts' establishment of a robust and reliable mechanism to track its backlog by case type and thus to pursue the interventions that are necessary to remove roadblock and to move a case towards disposition. The case backlog counts and the backlog rate must be assessed in tandem with productivity measures such as the case clearance rate and case congestion rates as well as the courtroom utilization rates. In general, a higher clearance rate will reduce the case backlog count and the backlog rate; however, low clearance rate will generally correlate with high case congestion rates and high case backlog. A direct association is, therefore, to be expected between case congestion rates and case backlog rates. Courts with heavy caseload, yet generally low courtroom utilization rates would be expected to have high backlog and case congestion rates. The considered view in many court systems worldwide is that case backlog rate of 10 per cent or more for any court should be considered as problematic, requiring special policy interventions and urgent remedies. As an illustration, let us assume that cases, which are unresolved for over 2 years, are considered to be in a state of backlog in a particular jurisdiction. If the pending caseload (encompassing both active and inactive cases) in the courts of this jurisdiction at the end of period (year) X is 1,000 cases and 600 of those cases are over 2 years old, then the gross backlog rate would be the 600 cases. Now if 400 of those 600 cases over 2 years old were inactive cases, then the net case backlog would be $600 - 400 = 200$ cases. Let us further assume that of the 400 actual total number of cases disposed during this year, 300 were over 2 years old at the point of disposition, then the case backlog rate would be $\frac{300}{400} * 100 = 75$ per cent. This result would suggest that based on the latest statistics, the probability of a case falling into a backlog classification would be 75 per cent.

One important challenge that faces all courts is the determination of the number of cases that needs to be disposed in order to reduce the net case backlog to zero over a period. This can be accomplished using the technique in calculus. To apply this technique, we create a simple mathematical model that expresses the net backlog rate as a function of the quantum of cases disposed. The equation can be developed using time series data of the net case backlog rate and the number of cases disposed. These data can be inputted into any mathematical programming software such as Matlab to generate the requisite function that describes the functional association between the two variables. The function can then be differentiated and equated to zero to find the optimal number of cases to be disposed in order to determine the required number of

disposed cases to attain a case backlog rate of zero. For example, if the mathematical function that describes the relationship between the net case backlog rate and the number of disposed cases in a particular court is given by the polynomial function:

$y = 5x^2 + 1,200x - 1,000$, where y is the backlog rate and x is the quantum of cases to be disposed, then the first derivative would be $\frac{dy}{dx} = 10x - 1,200$. When this is set equal to zero, it produces a result of $10x - 1,200 = 0$, so $10x = 1,200$, so $x = 120$. Thus, in order to attain a case backlog rate of zero, this court would need to dispose a quantum of 120 cases. Anything below this number will keep the court in a state of backlog; and the greater the distance below it, the more severe the case backlog. This approach creates a robust way for courts to monitor the progress been made in eliminating its backlog and to inform ongoing operational and judicial interventions.

In 2019, the gross backlog rate in the Supreme Court of Jamaica was 30.89 per cent, improving by 2.08 percentage points when compared to the 32.97 per cent recorded in 2018. Comparatively the net backlog rates for the Supreme Court were 24.51 per cent and 25.81 per cent, respectively, in 2019 and 2018. In the parish courts of Jamaica (excusing the traffic courts), the gross backlog rate for 2019 was 28.19 per cent; while in 2018, the rate was 29.85 per cent and the corresponding net backlog rates were 19.15 per cent and 21.23 per cent, respectively, for 2019 and 2018 (Supreme Court of Jamaica, 2019).

Average time taken to dispose of cases

Courts must have a good understanding of the average length of time taken to dispose of its various cases and case subtypes. This information is important in first making a determination of whether the times are reasonable based on the relative complexity of the cases and to inform the policies and resource allocation needed to prevent simpler matters from queuing with cases that are more complex. The average time to disposition for any case type or court as a whole is computed as the sum of all the time taken for the relevant population of cases to be disposed divided by the number of cases disposed. This is expressed mathematically as follows:

$$\text{Average time to disposition} = \frac{\sum T_i}{N_i} \quad (16)$$

Where T_i is the individual time taken to dispose of all cases in a case population in particular period and N_i is the number of cases disposed in that

period. As a simple example, if there were five cases disposed of a particular case type in period i , with times to disposition of 10, 13, 15, 19 and 25 months, respectively, then the average time to disposition for this case type would be the simple arithmetic average of these scores which would be roughly 16 months.

The probability that particular case types or subtypes will be disposed within any particular average time may also be determined using the principles of the central limits theorem. The central limits theorem states that if we have a population with the parameters mean (μ) and variance σ^2 , and we take a large enough random sample from this population (i.e. a sample size of 30 or more) without replacement, then the distribution of the values in the sample will be roughly normally distributed (LaMorte 2016). The central limits theorem will hold true even if the population from which the sample is drawn is skewed and will also be true for sample sizes less than 30 as long as the population of source is normal. To apply the central limits theorem, we standardize the data using the formula $Z = \frac{\bar{X} - \mu}{\frac{\sigma}{\sqrt{n}}}$, where \bar{X} is the sample mean, μ is the population mean, σ is the standard deviation and n is the sample size.

A court may, for example, wish to compute the probability that a set of cases of a certain type will be disposed in 3, 6, 8 or 12 months or any period of interest. The central limits theorem can be effectively and easily applied once the sample size for the estimate is greater than or equal to 30 days, the overall population average time taken to dispose of cases is known and the variance of the population of time taken to dispose the cases are also known. For example, let us say that it is known that the standard deviation of the time taken to dispose criminal cases in a particular court is 12 months and the average time taken to dispose a criminal case is 36 months. Using a sample of say 64 criminal cases, we can compute the probability that a sample of criminal cases will take an average time of say, more than 40 months to be disposed. We would standardize this data and compute the required probability as follows:

$$P(\bar{X} > 40) = P\left(Z < \frac{40 - 36}{\frac{12}{\sqrt{64}}}\right) = P\left(Z > \frac{4}{1.5}\right) = P(Z > 2.67) \\ = 1 - \Phi(2.67) = 1 - 0.99621 = 0.004 \text{ or } 0.4 \text{ per cent:}$$

The above result suggests that there is a 0.4 per cent chance that a criminal case selected at random will take more than 40 months to be disposed. In other words, four in every 1,000 cases disposed will take a period of more than 40 months. Application of the central limits theorem

in computing the proportion of cases, which are expected to be in the court system for a specific time period is an extremely important tool in planning and court administration.

In 2019, the average time to disposition was 2.21 years across the divisions of the Supreme Court of Jamaica, an improvement from 2.01 years when compared to 2018. In the parish courts (excluding the traffic courts), the estimated average time to disposition for cases disposed in 2019 was 1.95 years, down from 2.17 years in 2018. It is of note, however, that for both the parish courts and the Supreme Court of Jamaica, the variances in the average time to disposition for cases resolved in 2018 and 2019 were quite wide (Supreme Court of Jamaica, 2019).

The case turnover rates and the estimated disposition time for unresolved cases

The case turnover rate provides a measurement of the number of cases resolved (disposed), for every unresolved case. For example, if in a given period, the number of cases resolved is 500, but there were 700 unresolved cases at the end of the period (usually a year), then the case turnover rate would be $\frac{\text{Number of resolved cases}}{\text{Number of unresolved cases}} = \frac{500}{700} = 0.71$. This result implies that 71 resolved cases, for every 100 unresolved cases or 7 cases resolved for every 10 cases unresolved at the end of the reporting period. A case turnover rate of under 1 means that there are more unresolved than resolved cases, a figure of 1 implies that the number of resolved cases equates with the number of unresolved cases; while a rate of over 1 implies that there are more resolved than unresolved cases in the period. A sustained case turnover rate of less than 1 implies that there is a build-up in the court's case backlog. A declining case turnover rate implies that cases are on average taking longer to be disposed and the reverse is true when the case turnover rate is increasing. Hence, the case turnover rate can be used to estimate the length of time that it will, on average, take for unresolved cases to be disposed. Thus, using a year as a standard reporting period, the estimated case disposition time for unresolved cases can be computed as: Estimated case disposition time for unresolved cases = $\frac{365 \text{ days}}{\text{Case turnover rate}}$. Using the above scenario, this would work out to $\frac{365}{0.71} = 514$ days. This result implies that the remaining unresolved cases are expected to take an average of 514 days or 1.4 years to be disposed. Although this estimate does not always have practical significance because it ignores the potential effect of special interventions on expediting the disposition of cases, these two measures provide meaningful

insights into how well a court is doing in managing its caseload and informs planning and are useful compliments to the productivity measures, which were discussed earlier.

In the Jamaican Supreme Court, the overall case turnover rate for 2019 was 0.30, which is fairly low. This resulted in an estimated average case disposal time for the unresolved cases brought forward of 1,217 days or 3.33 years (Supreme Court of Jamaica, 2019).

The case age rate

The case age rate is an important measurement for assessing the effectiveness of courts in attaining the disposition of cases or categories of cases within targeted timelines. The case age may be computed as follows:

Case age rate=

$$\frac{\text{All cases disposed within a specified time guideline}}{\text{Sum of all cases disposed + cases pending within the specified time guidelines}} \times 100 \quad (17)$$

For example, if a timeline is established for all estate cases in a particular court to be disposed within 12 months and in that period 50 of the 100 cases disposed took less than 12 months while there are another 25 pending cases which are under 12 months old, then the case age rate would be computed as: $\frac{50}{100+25} \times 100 = 40$ per cent. This case age rate of 40 per cent here suggests that this proportion of the stock of cases at the end of the period, which could have possibly been disposed within the time guidelines, was actually disposed in that time. This metric is extremely useful in monitoring the effectiveness of courts in achieving prescribed timelines for the resolution of specific case types and subtypes. Along with productivity measurements such as the case clearance rate, the case age rate provides an important instrument in case management and target-driven planning and scheduling. The case age rate for the Jamaican Supreme Court in 2019 was 23.64 per cent, a slight decline of less than a percentage point from the 24.02 per cent recorded in 2018.

Conclusion

This article examined a wide range of measurements, which may be effectively used in tracking and quantifying court performance and the general state of affairs in courts. It clearly establishes a range of measurement categories and their applications and how various measurements

may be deployed in tandem to produce comprehensive court profiles and assessments. In so doing, this work creates a unique foundation for courts across the world to develop performance standards and to improve on the efficient delivery of justice to its citizens. The article clearly outlines that any serious analysis of the state of affairs in a court or court performance must be done by utilizing an appropriate mix of productivity and time lag measurements. The specific combination chosen will depend of the objective being pursued, however; the metrics proposed are both far reaching and easily applied to any court system, with an important proviso being the availability of reliable and comprehensive data and data systems.

References

- International Framework for Court Excellence (IFCE). Global Measures of Court Performance. Williamsburg, VA: NCSC, 2017.
- Keilitz, I. Why Do We Need Court Performance Standards? Manager's Briefcase. Williamsburg, VA: NCSC, 2002.
- Lamorte, W. "The Role of Probability: Central Limits Theorem." Boston University, November 2. Accessed October 12, 2019. http://sphweb.bumc.bu.edu/otlt/MPH-Modules/BS/BS704_Probability/BS704_Probability12.html.
- Legrand, P. "John Henry Merryman and Comparative Legal Studies: A Dialogue." *The American Journal of Comparative Law* 47, no. 1 (1999): 3–66. *JSTOR*. November 2. Accessed October 12, 2019. www.jstor.org/stable/840997.
- Supreme Court of Jamaica. "The Chief Justices Annual Statistics Report on the Supreme Court." The Statistics Unit of the Supreme Court of Jamaica, February 12. Accessed December 14, 2019. https://supremecourt.gov.jm/sites/default/files/THE%20CHIEF%20JUSTICE%27S%20ANNUAL%20STATISTICS%20REPORTFOR%20THE%20SUPREME%20COURT_2018-v.pdf.
- Supreme Court of Jamaica. "The Chief Justices Annual Statistics Report on Criminal Matters in the Parish Courts." The Statistics Unit of the Supreme Court of Jamaica, February 07. Accessed December 12, 2019. https://supremecourt.gov.jm/sites/default/files/THE%20CHIEF%20JUSTICE%27S%20ANNUAL%20STATISTICS%20REPORT%20ONCRIMINAL%20MATTERS_PARISH%20COURTS_t.pdf.
- Supreme Court of Jamaica. "The Chief Justices Annual Statistics Report on the Supreme Court." The Statistics Unit of the Supreme Court of Jamaica, February 17. Accessed December 14, 2019. https://supremecourt.gov.jm/sites/default/files/THE%20CHIEF%20JUSTICE%60S%20ANNUAL%20STATISTICS%20REPORTFOR%20THE%20SUPREME%20COURT%20FOR%202019_1%20%281%29.pdf.
- Supreme Court of Jamaica. "The Chief Justices Annual Statistics Report on Criminal Matters in the Parish Courts." The Statistics Unit of the Supreme

Court of Jamaica, February 07. Accessed December 13, 2019. https://supremecourt.gov.jm/sites/default/files/THE%20CHIEF%20JUSTICE%27S%20ANNUAL%20STATISTICS%20REPORT%20ONCRIMINAL%20MATTERS_PARISH%20COURTS_t.pdf.

The Economist. The World in 2017. London: The Economist Newspaper Limited, 2017.

Book Review

Yonique Campbell, *Citizenship on the Margins: State Power, Security and Precariousness in 21st-Century Jamaica*. Palgrave Macmillan

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Global patterns of urbanization and increased attention to dynamics of insecurity and conflict within cities has led to a global surge in efforts to reduce urban violence and crime since the 2000s. The Latin America and Caribbean region has become an epicentre of these efforts as demonstrated by the 1,300 public security and safety programmes implemented there between 1998 and 2013, according to the Igarape Institute. The implementation of a wide range of initiatives by national and local authorities, public institutions and civil and private actors with the support of development agencies, is a response to the profound security crisis in this region, which has become the most violent in the world. The staggering number of violent deaths that are still committed each year, the high levels of victimization and the increasing levels of fear of crime and violence experienced by citizens in the region point to the limited results of these efforts.

While homicide and crime rates remain as key indicators to assess security approaches in the region, and efforts by academics, funders and policymakers focus on improving statistical based monitoring and evaluation tools, Yonique Campbell rightly draws our attention to the importance of considering the impact of security approaches and policies on citizenship and in particular, on how 'citizenship is framed and enacted in marginalised spaces'. With *'Citizenship on the Margins,'* the author makes an important contribution to an expanding body of literature that analyses policing and security practices deployed by the state, in the context of and in relation to the extremely high levels of inequality and the kind of democracies that have consolidated in Latin American and Caribbean societies. By focusing on the narratives and experiences of (in)security of residents of three communities in Jamaica and on the discourses of policy elites and managers at the forefront of security policy

design in this country, the book argues that the ways in which the state has prioritised certain security problems and constructed the urban poor as threats to state security not only endangers the possibility of enjoying substantive forms of citizenship for the most vulnerable sectors of society, but also weakens state legitimacy and seriously affects the outcomes of security policies.

The book offers a critical analysis of the dominant security approach in Jamaica that resonates with the experience of other countries in the region. Using qualitative evidence from different relevant sites, Yonique Campbell shows the historical and structural factors and assumptions that have led to the construction of current security responses and their problematic consequences. Her book demonstrates why it is essential to analyse security provision in the context of power relations and take into account the way in which security policies play an important role in the government of populations and marginalization in the region. The author's methodological choice to focus on the community level enables her to make an important contribution to security studies which tend to be dominated by analyses of state and non-state actors' capacity to exercise power and authority, and of the functioning and performance of security institutions, but neglect the perspective of those who are subject to the power and interventions deployed by them. The advantages of using a methodological approach that re-focuses the analysis on people's experiences and understandings of security on the ground become clear as the author reveals a more complex picture of the problem of violence and insecurity in Jamaica and its inextricable and bi-directional relation with new expressions and forms of social exclusion and inequality. On one hand, the book exposes the role that class, status, space, culture and identity politics play in shaping people's security experiences, as well as how horizontal inequalities are reinforced across communities through security responses that treat citizens differently based on their communities' political and social geographies. On the other hand, the book uncovers the gap that exists between the priorities and objectives guiding the state's security agenda and the security needs of citizens.

The book tries to locate the analysis of the Jamaican case in the context of wider regional dynamics. As the author points out, similar processes are taking place in other countries across Latin America and the Caribbean, where the dramatic and overwhelming impact of chronic violence and the persistence of multiple forms of insecurity that fuel citizens' distrust of state institutions and antidemocratic attitudes are also reconfiguring state power and state-society relations. The author's effort to

bring into a dialogue the complexities of security provision in different countries is valuable for two reasons: 1) there are important commonalities in terms of national and local security challenges across the region given that these are shaped by transnational phenomena such as the expansion of drug trafficking, by common historical processes and by the influence of the United States' security interests; and 2) the policy transfer and exchange of practices and approaches -highly encouraged among police forces and policy-makers- are leading to the rolling out of 'models' that target marginalised areas and groups. In this context it is very important to identify regional trends in terms of challenges and outcomes of these security approaches.

This book also explores the process of enacting citizenship in the violent affected and securitised communities in Jamaica by taking into account not only the role of the state, but also of criminal actors in limiting or granting access to rights and in affecting the quality of citizenship. In this regard, although the book does not engage extensively with the growing literature on criminal governance in the region, it does make an important contribution to our understanding of the sources of legitimacy of criminal actors and the kind of coercive and exploitative orders they impose. While many studies have pointed to these actors' capacity to provide services to communities as the key source of acceptance -and, in some cases, support- among residents, Yonique Campbell demonstrates that a more complex interplay of economic, cultural, psychological and personal factors influence people's willingness to accept criminal governance. She points out that criminal actors can 'offer a way to deal with exclusion from society and to negotiate your sense of place and belonging', as well as how in a context where state practices -such as violent policing- reproduce violence and reinforce patterns of exclusion and marginalisation, the state indirectly contributes to strengthening the influence of criminal actors. In other words, the book illustrates that these actors are seen as providers of the societal respect that the state fails to offer to its citizens in such contexts.

Given that the book sets out to examine and 'counterpoise dominant security approaches and discourses in Latin America and the Caribbean, 'it is a weakness that it does not analyse in depth the notion of 'citizen security' and the extensive literature that has been produced in the region in the last three and a half decades. The discussion around security in the book conflates the concept of citizen security with that of human security, which is problematic given their differences in source, scope and influence as security approaches in the region. The notion of citizen security

emerged in Latin America as an attempt to reformulate security doctrine and practice in the context of the transition from authoritarian regimes to democracy. While it tried to refocus security on the protection of citizens and to detach it from national security –a notion that had justified state violence and repression– citizen security remained limited to the protection of people's lives, civil rights and property. In this sense, it appealed to a restrictive notion of security that differs from the human security approach first proposed by the UN in 1994, which called states to identify and address threats to people's lives and community wellbeing according to seven dimensions. On one hand, citizen security became a dominant approach in the region, prompting important legal and institutional reforms aimed at improving public policy and state institutions' control of violence and crime, especially in cities, and created consensus regarding the importance of implementing preventive programmes. On the other hand, the human security approach has not been embraced by policy-makers in the region and remains as a marginal notion in national and regional security debates.

This limitation however, does not obscure this book's valuable contribution to our understanding of the complex interplay between security and citizenship in the region, and in Jamaica in particular. The policy implications of that relation need to be further unpacked, but the author's point that improving security provision will depend not only on changing the security 'architecture', but also on promoting profound changes to the socio-political order in Jamaica, is relevant beyond this country's borders. Recent developments in Jamaica and other countries in the region seem to show that we are not moving in that direction, which makes Yonique Campbell's invitation to consider the unexpected consequences of current security approaches beyond homicide and crime statistics, an important one for researchers and policy-makers. Her contribution should prompt us to consider what type of policing and security responses can grasp the realities of marginalization, precariousness and inequality that persist as defining features of Latin America and the Caribbean.

Notes on Contributors

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Commander (Cdr) Judy-Ann Neil is a Wolmerian and a graduate of the University of Technology and the University of the West Indies respectively. She completed her initial officers' training at the Britannia Royal Naval College, UK in 1999 and was then posted to the Jamaica Defence Force Coast Guard (JDF CG). Cdr Neil is a qualified ship captain who has commanded all three of the original County Class Offshore Patrol Vessels at the JDF CG. She has over twenty-two years of service in the JDF and she is currently employed as the Commanding Officer/Commandant of the Directorate of Training and Doctrine Battalion. In November 2018, she graduated from the World Maritime University (WMU) in Sweden with an MSc in Maritime Affairs; she was the fifth President of the WMU Women's Association and also a recipient of the WMU Kalmar Award for Leadership.

Kim Moloney is a Senior Lecturer in Global Public Administration and Policy at Murdoch University in Perth Australia. Dr. Moloney is a former Lecturer in Public Sector Management within the Department of Government at UWI-Mona. Her research engages two agendas: island-state administration via debt administration among Caribbean and Pacific states, donor-NGO non-partnership in the Pacific, or studies specific to Jamaica on public service motivation and/or non-collaborative governance. Her second research agenda engages transnational administration and the bureaucrats within international organizations. This includes co-editing (with Diane Stone) the 40-chapter Oxford Handbook on Global Policy and Transnational Administration (2019). She is also the Elected Chair (until 4/2021) of the Section on International and Comparative Administration within the American Society of Public Administration.

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