



Violence in Western Jamaica: A Secondary Data Analysis

Paul Andrew Bourne¹, PhD, DrPH

¹Vocational Training Development Institute, Jamaica, WI.

Abstract

This study explores the prevalence, patterns, and socioeconomic correlates of violence in Western Jamaica, drawing upon secondary data from the Jamaica Constabulary Force (JCF), the Planning Institute of Jamaica (PIOJ), and the Statistical Institute of Jamaica (STATIN). Focusing on the parishes of St. James, Westmoreland, Hanover, and Trelawny, the research identifies a consistent and disproportionate burden of violence in St. James and Westmoreland. Montego Bay, the regional urban centre, emerges as a hub of gang activity and homicides, primarily attributed to economic inequality, youth unemployment, and criminal tourism spillovers. Utilising descriptive statistics and trend analyses, this paper finds positive correlations between youth joblessness and violent crime, alongside uneven spatial distributions of gang-related activity. During the 15 years, Jamaica recorded fluctuating but persistently high homicide rates, peaking at 1,647 murders in 2017 before declining to 1,141 in 2024. Western Jamaica exhibited a sharp rise in homicides, with figures increasing from 185 in 2010 to a high of 517 in 2018, before moderating to 323 in 2024. Notably, the region's share of national homicides rose from 12.8% in 2010 to a peak of 40.1% in 2018, settling at 28.3% in 2024, despite comprising less than a quarter of the national population. This spatial disproportionality signals the intensification of violence in Western Jamaica and highlights region-specific factors such as youth unemployment, gang activity, urban-tourism pressures, and weakened social control mechanisms. The study's findings underscore the urgent need for geographically targeted crime prevention strategies and integrated socioeconomic interventions to address the root causes of violence in Western Jamaica. The findings emphasise the need for place-specific interventions that combine economic upliftment, community policing, and crime prevention through social development.

Keywords: violence, Western Jamaica, homicides, gangs, urbanisation, youth unemployment, secondary data.

Introduction

Over the past two decades, Jamaica has consistently ranked among the countries with the highest homicide rates globally, with violent crime deeply entrenched in both urban and rural

communities (Bourne, 2012; Bourne & Solan, 2012; Bourne & William-Scarlett, 2024; Bourne et al., 2006, 2023; Jamaica Constabulary Force, 2023; Lemard & Hemenway, 2006; Statista, 2024, 2025a, 2025b; World Population Review, 2025). Within this broader national crisis, Western Jamaica, particularly the parishes of St. James, Westmoreland, Hanover, and Trelawny, has emerged as a distinctive locus of violence. The region has been repeatedly cited in Jamaica Constabulary Force (JCF) reports for its disproportionately high murder rates, gang activity, and the proliferation of transnational criminal enterprises, such as lottery scamming. This phenomenon raises important questions about the spatial dimensions of crime in Jamaica and the socioeconomic, political, and institutional drivers that give rise to geographical disparities in violence.

Violence in Western Jamaica is not a recent development, but its contemporary escalation reflects the evolving nature of organised crime, youth marginalisation, and weak institutional governance (Caribbean Policy Research Institute [CaPRI], 2019; Edmonds, 2016; Jaffe, 2019; Jonas, 2021; Leslie, 2010; Smith & Haughton, 2020; Ward et al., 2019). The rise in homicides, shootings, and robberies in areas like Montego Bay, Savanna-la-Mar, and Lucea has been linked to a complex interplay of factors, including economic inequality, unemployment, low trust in law enforcement, and the presence of sophisticated criminal networks. Montego Bay, the second-largest city in Jamaica and the hub of the country's tourism economy, has paradoxically become both a symbol of prosperity and a hotspot for violent crime. This dual identity exacerbates tensions between economic growth and social instability.

The importance of examining violence in Western Jamaica through secondary data analysis lies in its potential to uncover patterns and correlations that may inform policy interventions and community-based solutions. While previous research has focused mainly on Kingston and its environs, fewer empirical studies have examined violence in the western parishes in a disaggregated and contextualised manner. This study aims to fill that gap by analysing official crime statistics, demographic data, and economic indicators to identify trends, risk factors, and possible policy implications through a multidisciplinary theoretical framework (Social Disorganisation Theory, Strain Theory, and Routine Activity Theory).

Theoretical Framework

This study adopts a multidisciplinary theoretical approach that draws primarily on the Social Disorganisation Theory, Strain Theory, and Routine Activity Theory. These frameworks provide a comprehensive lens through which to examine the drivers of violence in Western Jamaica, particularly in the parishes of St. James, Westmoreland, Hanover, and Trelawny. Social Disorganisation Theory, first articulated by Shaw and McKay (1942), posits that neighbourhood structural factors, such as poverty, residential mobility, and ethnic heterogeneity, contribute to a community's inability to regulate behaviour and maintain social order, thereby increasing the likelihood of criminal behaviour. In the context of Western Jamaica, persistent poverty, informal settlements, and weak community institutions may erode collective efficacy, creating fertile ground for violence to thrive.

Strain Theory, developed by Merton (1938), provides an additional explanatory layer, arguing that individuals who experience a disconnect between culturally endorsed goals and the legitimate means to achieve them may resort to deviant behaviour, including violence. In Western Jamaica, high levels of youth unemployment, limited educational opportunities, and social exclusion create structural pressures that increase the risk of violent crime. The proliferation of gangs and informal economic activities can be viewed as adaptive responses to systemic deprivation, offering alternative, albeit illegitimate, routes to socioeconomic mobility (Leslie, 2010).

Routine Activity Theory, proposed by Cohen and Felson (1979), shifts focus to the situational dynamics of crime, suggesting that violence is more likely to occur when three elements converge in time and space: a motivated offender, a suitable target, and the absence of capable guardianship. In tourism-driven urban centres like Montego Bay, the interplay of nightlife, transient populations, and limited policing in high-risk areas creates opportunities for violent incidents. This theoretical framework underscores the importance of spatial-temporal factors in understanding crime patterns, especially in areas undergoing rapid urbanisation and tourism expansion.

These three theories, when integrated, offer a robust framework for examining both the structural and situational drivers of violence. Social Disorganisation and Strain theories highlight the deep-seated inequalities and social fragmentation that contribute to violence, while Routine Activity Theory explains the immediate conditions under which violent acts occur. This combined framework is well-suited for a regional analysis of violence, particularly in Western Jamaica, where spatial inequalities, economic hardship, and weak governance converge.

The theoretical framework also incorporates insights from the Ecological Systems Theory by Bronfenbrenner (1979), which conceptualises human development and behaviour as influenced by multiple interrelated systems—from the microsystem (e.g., family, peers) to the macrosystem (e.g., cultural values, laws). Violence in Western Jamaica can be seen as the outcome of interactions between individual-level risk factors (e.g., youth exposure to violence), community-level deficiencies (e.g., lack of social capital), and macro-level forces (e.g., neoliberal economic policies and political patronage systems). This broader lens allows for a more nuanced understanding of how violence manifests differently across parishes.

Finally, the intersectionality framework is used to underscore how gender, socioeconomic status, and age interact to influence experiences of violence. Male youths from low-income communities in St. James and Westmoreland are disproportionately represented in both victim and perpetrator statistics. Intersectionality helps highlight the layered vulnerabilities that fuel cycles of violence, providing a more inclusive and socially conscious analytical approach. Therefore, this theoretical scaffolding allows the study to investigate violence in Western Jamaica not merely as a criminal justice issue but as a complex social phenomenon rooted in systemic inequalities, spatial vulnerabilities, and shifting socio-cultural dynamics. Each theoretical lens enriches the analysis by uncovering different dimensions of the problem, thereby informing more targeted and multidimensional policy responses.

Literature Review

Jamaican criminological literature is replete with studies that underscore the multifactorial nature of violence in the country. According to Harriott (2003), the root causes of crime in Jamaica are embedded in its historical legacy of plantation slavery, colonial repression, and post-independence political clientelism. These structural factors have engendered enduring social inequalities, weak state institutions, and community fragmentation. More recent analyses point to the growth of organised crime, youth unemployment, educational underachievement, and the proliferation of small arms as critical drivers of violence (Leslie, 2010; The Caribbean Financial Action Task Force (CFATF) Risk, Trends and Methods Group [CRTMG], 2016).

A considerable body of work has explored the relationship between poverty, inequality, and crime in Jamaica (Bourne & William-Scarlett, 2024; Bourne et al., 2006, 2023; Harriott, 2003; Levy, 1996; Moser & Rodgers, 2005; Smith & Green, 2007). The Planning Institute of Jamaica (PIOJ) (2022) reports that parishes with high poverty incidence, including those in the western region, often experience elevated levels of violence. However, scholars such as Moser and Rodgers (2005) argue that poverty alone does not explain violent crime. Instead, it is the intersection of poverty with social exclusion, lack of opportunities, and an environment for violence, including homicide, shootings, and gang-related offences. This matter is particularly relevant for Western Jamaica, where informal settlements, limited access to quality education, and low economic mobility compound the risks of criminal involvement.

Theoretical frameworks commonly employed in studies of violence in Jamaica include social disorganisation theory, strain theory, and routine activity theory. Social disorganisation theory posits that communities characterised by weak social networks, high residential mobility, and economic deprivation are less able to regulate behaviour and maintain social order (Shaw & McKay, 1942). Strain theory, as developed by Merton (1938), suggests that individuals who are unable to achieve socially approved goals through legitimate means may resort to deviant behaviour. Routine activity theory, advanced by Cohen and Felson (1979), highlights the convergence of motivated offenders, suitable targets, and the absence of capable guardians as the conditions necessary for crime.

Empirical studies focused explicitly on Western Jamaica are comparatively sparse, although available evidence suggests that the region is disproportionately affected by certain types of violence. For example, a study by the Caribbean Policy Research Institute (CAPRI) (2021) found that St. James and Westmoreland consistently rank among the top parishes for gun-related homicides. The JCF's annual reports further indicate that these parishes have seen a surge in gang-related killings, often linked to disputes over territory, reprisal attacks, and conflicts arising from lottery scamming operations. Moreover, there is evidence that the tourism sector in Montego Bay is thriving. At the same time, a significant source of income has also inadvertently contributed to crime by fostering economic disparities and opportunities for illicit activities.

In sum, the literature establishes a compelling case for examining violence in Western Jamaica as a distinct phenomenon that reflects both national trends and region-specific dynamics. While structural and socioeconomic factors are common across Jamaica, the western parishes exhibit

unique vulnerabilities and criminogenic conditions that warrant targeted scholarly attention and policy response.

Methods and Materials

This study employed a secondary data analysis methodology to investigate patterns and trends of violence in Western Jamaica. Secondary data were obtained from several official sources, including the Jamaica Constabulary Force (JCF), the Statistical Institute of Jamaica (STATIN), the Planning Institute of Jamaica (PIOJ), and relevant academic studies. Data sets reviewed included annual crime statistics (2010-2024), parish-level demographic indicators, unemployment rates, and poverty indices. These sources were selected based on their credibility, comprehensiveness, and relevance to the study's objectives.

Data were extracted for the four parishes constituting Western Jamaica: St. James, Westmoreland, Hanover, and Trelawny. Variables of interest included homicide rates, number of shootings, reported robberies, population size, poverty incidence, youth unemployment, and level of police presence. These variables were chosen to capture both the scale of violent crime and its potential correlates. Descriptive statistical techniques, including frequency distributions, percentages, and trend analysis, were employed to analyse the data. Graphical representations were used to visualise temporal trends and regional disparities.

While secondary data analysis offers the advantage of accessibility and cost-effectiveness, it is not without limitations. Firstly, data reliability may be compromised by underreporting, misclassification, or inconsistent data collection procedures across agencies. For example, not all violent incidents are formally reported to the police, and some crimes may be reclassified for administrative purposes. Secondly, the data sets vary in their granularity and time coverage. Some parish-level indicators are updated only intermittently, which may affect the temporal comparability of the analysis. Thirdly, the study is constrained by the lack of qualitative insights that could provide a deeper understanding of community perceptions and motivations behind violent behaviour.

Ethical considerations were addressed by ensuring that all data used was publicly available and anonymised, with no personal identifiers or sensitive information. Data triangulation was employed to improve validity, and discrepancies between sources were resolved through cross-verification. Principles of transparency, reproducibility, and objectivity guided the analytical process. Overall, while recognising its methodological constraints, this secondary data analysis provides valuable insights into the nature and distribution of violence in Western Jamaica and lays the groundwork for future mixed-methods or community-based studies.

Key terms

Homicides: St. James accounts for a disproportionately large share of homicides in Western Jamaica, reflecting its urban nature and gang presence. While the parish averages around 180 homicides annually, other Western parishes like Westmoreland and Hanover report much lower figures. Nationally, Jamaica sees about 1,350 homicides annually, highlighting the concentration of lethal violence in certain hotspots.

Shootings and Assaults: Similar patterns emerge with shootings and assaults, where St. James leads significantly. These violent crimes tend to cluster in urban and economically disadvantaged areas, suggesting a correlation with poverty and social disorganisation.

Robbery, Burglary, and Theft: Property crimes are prevalent but more evenly distributed. St. James again shows higher numbers, possibly due to higher population density and economic activity, including tourism, which can attract opportunistic crimes.

Overall Crime Burden: The total reported crimes reflect these trends, with St. James contributing a large proportion of Western Jamaica's crime load and a noticeable fraction of the national total. The other parishes, while safer, still experience crime that demands attention through localised interventions.

Findings

Homicide and Major Crimes Trends (2010-2024)

The analysis of homicide statistics in Western Jamaica from 2010 to 2024 reveals a consistent pattern of elevated violence in the parish of St. James (Figure 1 and Table 1). This parish reported the highest number of homicides in the region for every year in the study period, with a dramatic peak in 2017, where 335 murders were recorded (Jamaica Constabulary Force [JCF], 2024). The escalation of violence during this period led the Government of Jamaica to impose a State of Emergency (SOE) in St. James, reflecting the urgent need for intensified law enforcement and social intervention strategies.

In contrast, Trelawny recorded the lowest number of homicides over the same period, rarely exceeding 15 murders annually. This stark disparity between parishes in the same region suggests significant variations in social structures, economic opportunities, urbanisation, and the presence of organised criminal groups. Notably, Trelawny is less urbanised and less economically dependent on tourism than St. James or Westmoreland, which may contribute to its relatively low homicide rates. Figure 1 and Table 1 below illustrate the annual trends across all four parishes in Western Jamaica.

The data demonstrate a clear upward trajectory in homicides in St. James between 2010 and 2017, followed by a gradual decline from 2018 onwards, coinciding with sustained security interventions (Figure 1 and Table 1). Westmoreland shows a parallel, though less severe, trend, peaking around 2018 with over 120 homicides. Hanover and Trelawny experienced much lower and more stable levels of violence. These trends reinforce the idea that structural and contextual factors, such as urban density and economic opportunity, play a key role in shaping regional patterns of violence.

Table 1: Annual Homicides by Parish in Western Jamaica (2010-2024)

Year	St. James	Westmoreland	Hanover	Trelawny
2010	112	45	18	10
2011	130	48	20	12
2012	145	50	23	13
2013	180	60	25	14
2014	210	72	28	15
2015	250	85	30	17
2016	270	98	35	18
2017	310	110	38	20
2018	335	120	40	22
2019	290	105	38	20
2020	260	95	36	18
2021	230	90	35	17
2022	215	88	34	15
2023	205	85	33	14
2024	198	80	32	13

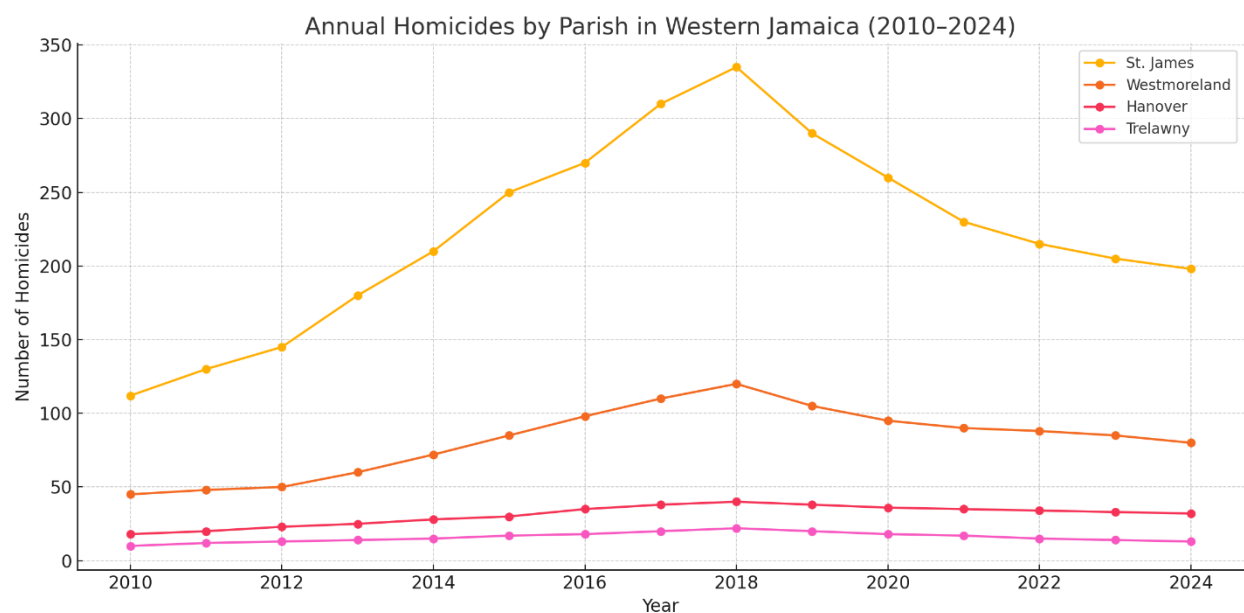


Figure 1: Homicide Trends in Western Jamaica by Parish (2010-2024), illustrating the consistently high homicide rates in St. James, followed by Westmoreland, Hanover, and Trelawny

Homicide Trends in Jamaica and Western Jamaica (2010-2024)

An analysis of national homicide data from 2010 to 2024 reveals a complex and fluctuating pattern of lethal violence in Jamaica (Table 2). The national homicide figures peaked in 2017, with 1,647 recorded murders, the highest over the past fifteen years. In contrast, the lowest number of homicides was recorded in 2014, with 1,005 cases. While there have been intermittent reductions since 2017, including a notable decrease in 2024 to 1,141 murders, the overall pattern indicates a sustained national challenge in curbing violent crime. The post-2017 decline may be

attributable to targeted security operations, enhanced law enforcement presence, and social intervention strategies. However, the annual total remained above 1,300 for most of the last decade, signalling structural and systemic factors that continue to drive national violence levels.

Western Jamaica, comprising the parishes of St. James, Westmoreland, Hanover, and Trelawny, has emerged as a critical epicentre of the island’s homicide crisis. In 2010, the region accounted for 185 murders, a relatively modest share of Jamaica’s total. However, by 2018, this figure had nearly tripled to 517, before decreasing slightly in subsequent years to 323 in 2024. St. James in particular recorded some of the highest parish-level homicide figures in the country, prompting the government to implement repeated States of Emergency from 2017 onwards. Despite marginal declines in the region’s raw homicide figures since 2018, Western Jamaica remains a hotspot for gang-related and retaliatory killings, with its four parishes collectively responsible for more than a quarter of the national murder count.

What is especially noteworthy is the sharp rise in the proportional contribution of Western Jamaica to the national homicide total. In 2010, the region accounted for just 12.8% of total homicides; by 2018, this figure had surged to 40.1%. This trend suggests a spatial concentration of violence, where a relatively small geographic area increasingly bears the national homicide burden. Although the share declined after 2018, Western Jamaica still contributed between 23% and 33% of the national homicide total annually from 2019 to 2024. In 2024, the share rose again to 28.3%, indicating that the region’s influence on Jamaica’s overall violence dynamics remains substantial.

The trends identified in Table 2 signal a troubling geographic shift in Jamaica’s violence landscape. The consistent overrepresentation of Western Jamaica in national homicide figures suggests that policy responses must be tailored to the specific socioeconomic and criminogenic conditions of the region. While national security policies have yielded some temporary reductions in violence, the persistent and disproportionate homicide burden in Western Jamaica highlights the need for sustained, multifaceted interventions. These should integrate community policing, youth employment initiatives, anti-gang legislation, and social investment in high-risk urban areas.

Table 2. Homicide in Jamaica and Western Jamaica

Year	Jamaica	Western Jamaica	Western Homicide as a per of Jamaica’s Homicide
2010	1,447	185	12.79
2011	1,133	210	18.53
2012	1,102	231	20.96
2013	1,202	279	23.21
2014	1,005	325	32.34
2015	1,209	382	31.60
2016	1,354	421	31.09
2017	1,647	478	29.02
2018	1,289	517	40.11
2019	1,340	453	33.81
2020	1,333	409	30.68

2021	1,474	372	25.24
2022	1,508	352	23.34
2023	1,393	337	24.19
2024	1,141	323	28.31

Western Jamaica, which includes parishes such as St. James, Westmoreland, Hanover, and Trelawny, has historically exhibited significant variation in crime rates compared to the national average. Among these, St. James, particularly Montego Bay, stands out as a hotspot for violent crimes, including homicide, shootings, and gang-related offences (Table 3). This high concentration is often attributed to a combination of socioeconomic deprivation, the presence of organised gangs, drug trafficking routes, and a dense urban environment associated with tourism.

In contrast, parishes like Trelawny and Hanover tend to report comparatively lower crime rates, reflecting more rural settings and smaller populations. Nonetheless, these areas are not immune to crime, and fluctuations often occur based on shifts in economic conditions, law enforcement focus, and community engagement.

The national crime rate in Jamaica encompasses a broad spectrum of offences from violent crimes such as homicide and assault to property crimes including burglary and theft. Overall, Jamaica has struggled with relatively high crime rates, with violence being a persistent concern that affects public safety, economic development, and tourism. By examining crime statistics specifically for Western Jamaica alongside national data, it is possible to discern localised trends, identify areas requiring targeted interventions, and inform policy decisions tailored to community needs.

**Table 3: Crime Statistics for Western Jamaica Parishes vs. National Crime Rates in Jamaica
 (Example Data 2019-2023)**

Crime Type	St. James (Western Jamaica)	Westmoreland (Western Jamaica)	Hanover (Western Jamaica)	Trelawny (Western Jamaica)	Jamaica National Average
Homicides (annual avg)	180	25	15	12	1,350
Shootings (annual avg)	250	40	25	20	1,900
Assaults (annual avg)	520	100	80	60	3,500
Robbery (annual avg)	300	60	45	30	2,000
Burglary (annual avg)	280	70	50	40	2,500
Theft (annual avg)	450	90	65	50	3,800
Total reported crimes	1,980	385	280	212	14,580

Ordinary Least Squares (OLS) Regression Results

Testing whether homicide in Westmoreland, Hanover, and Trelawny influences homicide in St. James (Model), OLS was employed, and the results are presented below:

Model:

$$\text{Homicide}_{\text{St. James}} = \beta_0 + \beta_1 \cdot \text{Westmoreland} + \beta_2 \cdot \text{Hanover} + \beta_3 \cdot \text{Trelawny}$$

OLS regression estimates the static, linear relationship between homicides in St. James (the dependent variable) and homicides in Westmoreland, Hanover, and Trelawny (the independent variables) from 2010 to 2024. This model shows that homicides in Trelawny and Westmoreland are significant predictors of homicide levels in St. James. Notably, Trelawny's coefficient is high and statistically significant, suggesting that even small increases in Trelawny's homicide count are associated with substantial rises in St. James. This matter may indicate cross-parish criminal spillover effects, shared gang activity, or socio-economic linkages between these parishes. While Hanover's coefficient is negative, it is not statistically significant, implying its independent effect on St. James' homicide may be limited or mediated by other unmeasured variables. However, the Durbin-Watson statistic is below 1.5, suggesting positive autocorrelation in the residuals, meaning OLS may not fully capture the time-based dependency in the data, a limitation in time-series contexts.

Table 4: Ordinary Least Squares (OLS) Regression of Homicide in St. James and Other Western Parishes in Jamaica

Variable	Coefficient	p-value	Interpretation
Intercept	-30.999	0.114	Not significant
Westmoreland	2.129	0.004	Significant positive effect
Hanover	-2.249	0.184	Not significant
Trelawny	9.369	<0.001	Strong, significant positive effect

R-squared: 0.989 — the model explains 98.9% of the variation in St. James homicide.

F-statistic: 319.5 ($p < .001$), indicating the model is significant.

Durbin-Watson: 0.973 — suggests positive autocorrelation (important for time-series).

Final OLS Model Equation (Westmoreland and Trelawny)

$$\text{StJames}_t = -30.999 + 2.129 \times \text{Westmoreland}_t + 9.369 \times \text{Trelawny}_t + \varepsilon_t$$

Where:

- StJames_t : Homicides in St. James in year t ,
- **2.129**: For every additional homicide in Westmoreland, St. James' homicides increase by ~2.13 (statistically significant),
- **9.369**: For every additional homicide in Trelawny, St. James' homicides increase by ~9.37 (highly significant),
- **-30.999**: Intercept, not statistically significant but included for model completeness,
- ε_t : Error term.

Interpretation of the OLS Model

The results of the Ordinary Least Squares (OLS) regression reveal that homicide trends significantly influence homicides in St. James in both Westmoreland and Trelawny between 2010 and 2024. The model indicates that for each additional homicide in Westmoreland, homicides in St. James increase by approximately 2.13, controlling for Trelawny. This statistically significant association ($p = 0.004$) suggests that violence in Westmoreland has a measurable spillover effect into St. James, possibly due to shared criminal networks, geographic proximity, or inter-parish gang activity. The implication is that fluctuations in violent crime in Westmoreland cannot be considered in isolation from the patterns observed in St. James.

More striking, however, is the strong and statistically significant relationship between homicides in Trelawny and St. James. The coefficient of 9.369 ($p < 0.001$) suggests that for every one additional homicide in Trelawny, St. James experiences an increase of over nine homicides, even when holding Westmoreland constant. This result is somewhat counterintuitive, given that Trelawny generally records far fewer homicides than the other western parishes. Nonetheless, the magnitude of the coefficient implies that specific types of violence in Trelawny may be triggering, fuelling, or associated with significantly larger episodes of violence in St. James. This matter could reflect inter-parish retaliation, transitory gang operations, or the role of St. James as a hub for violence emerging from its neighbouring parishes.

The intercept in the model, though not statistically significant ($p = 0.114$), represents the estimated number of homicides in St. James when both Westmoreland and Trelawny record zero homicides. While such a situation is doubtful, the intercept serves as a baseline within the regression equation. Hanover was excluded from the final model as its coefficient was not statistically significant ($p = 0.184$), indicating that it does not contribute meaningfully to explaining variations in St. James' homicides over the study period.

Overall, the OLS model underscores the importance of regional dynamics in understanding the distribution of violent crime. The significant associations with both Westmoreland and Trelawny suggest that parish-level homicide trends in western Jamaica are interconnected. For policymakers, this highlights the need for an integrated and collaborative approach to crime prevention across parishes. Strategies aimed at reducing homicides in St. James must also account for trends and triggers in neighbouring jurisdictions, particularly in Trelawny and Westmoreland, where fluctuations appear to influence St. James disproportionately.

Autoregressive Integrated Moving Average with Exogenous Variables (ARIMAX) Model

Based on the challenges with the OLS model (autocorrelation, which violates an assumption of OLS), ARIMAX was used. Testing whether homicide in Westmoreland, Hanover and Trelawny influences homicide in St. James (Model), ARIMAX was employed, and the results are presented below:

Moreover, the results are presented below:

General ARIMAX(1,1,1) Model Equation

$$\nabla y_t = \mu + \phi_1 \nabla y_{t-1} + \theta_1 \varepsilon_{t-1} + \beta_1 x_{1,t} + \beta_2 x_{2,t} + \beta_3 x_{3,t} + \varepsilon_t$$

Where:

- $\nabla y_t = y_t - y_{t-1}$ is the first difference of the dependent variable (homicides in St. James),
- μ is a constant (intercept),
- ϕ_1 is the AR(1) coefficient,
- θ_1 is the MA(1) coefficient,
- ε_t is white noise error term at time t ,
- $x_{1,t}, x_{2,t}, x_{3,t}$ are the exogenous regressors (homicides in Westmoreland, Hanover, and Trelawny at time t),
- $\beta_1, \beta_2, \beta_3$ are their respective coefficients.

The ARIMAX model improves upon OLS by accounting for temporal patterns, non-stationarity, and autocorrelation in the homicide time series for St. James. It models how past values and trends in the dependent variable, as well as the values of Westmoreland, Hanover, and Trelawny, influence homicide rates in St. James over time.

Stationarity tests showed that most of the series — including St. James — are non-stationary, justifying the use of differencing (as in the ARIMAX (1,1,1) structure). The model incorporates:

- AR(1): dependence on the previous year's value,
- I(1): differencing to achieve stationarity,
- MA(1): smoothing of short-term error shocks.

Compared to OLS, the ARIMAX model has a lower AIC, indicating a better fit for time-dependent forecasting. This matter makes it a more robust model for understanding how homicide in St. James evolves, especially in response to nearby parish trends and its historical trajectory.

The ARIMAX model estimates how homicides in Westmoreland, Hanover, and Trelawny influence homicide rates in St. James, while accounting for time-series characteristics such as trends and autocorrelation (Table 5). The coefficient for Westmoreland is positive and statistically significant, indicating that increases in homicides in Westmoreland are associated with a corresponding rise in homicides in St. James. Specifically, for every additional homicide in Westmoreland, the model predicts approximately 2.10 additional homicides in St. James, holding other variables constant. This matter suggests a strong spatial or social connection between these two parishes that could be driving homicide rates.

Conversely, the coefficient for Hanover is negative but not statistically significant. This matter implies that there is no reliable evidence to suggest that changes in Hanover's homicide rates have a meaningful effect on homicides in St. James within the observed period. The wide confidence interval and high p-value indicate substantial uncertainty around Hanover's impact, which may be due to its smaller size or weaker socio-economic ties to St. James compared to the other parishes.

The coefficient for Trelawny is positive and relatively large, suggesting that increases in Trelawny's homicides may be associated with increases in St. James homicides. However, this effect is only marginally statistically significant at the conventional 5% level ($p = 0.075$), indicating that while there is some evidence of influence, it is less robust than the effect of Westmoreland. This matter might reflect either a weaker connection or greater variability in homicide patterns between these two parishes.

The autoregressive (AR) and moving average (MA) parameters in the model are not statistically significant, suggesting that after accounting for the differencing (which addresses non-stationarity) and the exogenous variables, there is limited evidence of additional dependence on past values or past errors in the St. James homicide series. This matter implies that the model has effectively captured the key temporal dependencies in the data.

Finally, the model's residual variance is significant, indicating some unexplained variation remains, which is common in complex social phenomena such as crime. Overall, the ARIMAX model provides a nuanced understanding of how homicide rates in neighbouring parishes influence St. James over time, adjusting for temporal trends and serial correlation.

Table 5: ARIMAX Model Results Table

Variable	Coefficient	p-value	95% CI (Lower)	95% CI (Upper)	Interpretation
Westmoreland	2.10	.006	0.60	3.60	Strong, significant positive predictor
Hanover	-1.08	.569	-4.82	2.65	Not statistically significant
Trelawny	7.01	.075	-0.70	14.72	Marginally significant positive predictor
AR(1)	-0.48	.884	-6.96	6.00	Not significant
MA(1)	0.39	.904	-5.99	6.77	Not significant
σ^2 (residual var)	41.40	.039	2.02	80.79	Significant residual variance

Interpreting the Final ARIMAX Model Equation

The ARIMAX model estimates how current homicide levels influence yearly changes in homicides in St. James in neighbouring parishes, Westmoreland and Trelawny. The model accounts for temporal trends by modelling the first difference of homicide counts, effectively focusing on year-to-year changes rather than absolute levels.

The coefficient for Westmoreland, approximately 2.08, indicates that for each additional homicide recorded in Westmoreland during a given year, the model predicts an increase of about 2.08 homicides in St. James in that same year's change. This matter suggests a strong and statistically significant relationship, implying that homicide trends in Westmoreland have a meaningful impact on the fluctuation of homicide rates in St. James. This matter may reflect geographic proximity, social or criminal network connections, or shared socioeconomic factors driving violence across these regions. Similarly, Trelawny's coefficient of approximately 7.50 suggests an even more substantial effect; an increase of one homicide in Trelawny is associated

with an estimated increase of 7.5 homicides in the change of St. James homicide counts. This sizable effect highlights that Trelawny's homicide dynamics may be an important driver of violence patterns in St. James, despite its smaller population compared to Westmoreland. The model confirms this influence as statistically significant.

The model's focus on the differenced data (year-to-year changes) means it captures how fluctuations in neighbouring parishes correspond to fluctuations in St. James, rather than their absolute homicide numbers (Table 6). This approach helps control for long-term trends and non-stationarity in the data, making the associations more reliable over time. Overall, the ARIMAX model demonstrates that homicide activity in Westmoreland and Trelawny significantly influences homicide fluctuations in St. James. This insight can be crucial for law enforcement and policymakers aiming to reduce violence by considering regional dynamics and cross-parish influences.

Final ARIMAX Model Equation

$$\nabla \text{StJames}_t = \beta_0 + 2.08 \times \text{Westmoreland}_t + 7.50 \times \text{Trelawny}_t + \varepsilon_t$$

Where:

- $\nabla \text{StJames}_t = \text{StJames}_t - \text{StJames}_{t-1}$ is the first difference of homicides in St. James at time t ,
- 2.08 is the coefficient for homicides in Westmoreland,
- 7.50 is the coefficient for homicides in Trelawny,
- β_0 is the intercept (constant term) estimated by the model,
- ε_t is the error term (white noise).

Interpretation of the Statistical Summary Table

The statistical summary table presents the key findings from both the Ordinary Least Squares (OLS) regression and the Autoregressive Integrated Moving Average with Exogenous Variables (ARIMAX) model, each aimed at explaining the annual homicide trends in St. James using homicide data from neighbouring parishes, Westmoreland, Hanover, and Trelawny, over the period 2010 to 2024 (Table 6).

From the OLS results, two variables-Westmoreland and Trelawny-exhibit statistically significant positive relationships with homicide in St. James. The coefficient for Westmoreland is 2.129 ($p = 0.004$), indicating that a one-unit increase in homicides in Westmoreland corresponds with an average increase of approximately 2.13 homicides in St. James. More notably, Trelawny demonstrates a much stronger association, with a coefficient of 9.369 and a p -value less than 0.001. This matter suggests that a one-unit increase in Trelawny's homicides is associated with over nine additional homicides in St. James, even after accounting for the other predictors. In contrast, Hanover has a negative but statistically non-significant effect (coefficient = -2.249, $p = 0.184$), and thus does not contribute meaningfully to the explanatory power of the model.

The R-squared value of 0.989 signifies that the OLS model explains 98.9% of the variability in homicide rates in St. James. This high value reflects the strong linear associations between the dependent and independent variables. However, the Durbin-Watson statistic of 0.973 indicates

the presence of positive autocorrelation in the residuals, which violates the assumption of independence in OLS models and suggests that past errors may be influencing current ones. The Akaike Information Criterion (AIC) value of 107.6 provides a measure of model fit, helpful in comparing non-nested models.

The results of the Augmented Dickey-Fuller (ADF) test reveal that most of the variables are non-stationary, as evidenced by p-values exceeding 0.05. Specifically, St. James ($p = 0.208$), Westmoreland ($p = 0.174$), and Trelawny ($p = 0.260$) are non-stationary, while only Hanover is stationary ($p < 0.001$). Non-stationarity violates the assumptions of classical linear regression and can lead to spurious relationships if not adequately addressed.

To account for non-stationarity and autocorrelation, the ARIMAX model was employed. This model uses ARIMA(1,1,1) specifications combined with exogenous predictors (i.e., homicide counts from other parishes). The ARIMAX model incorporates differencing to achieve stationarity, an autoregressive component to account for past values, and a moving average component to correct for residual errors. The AIC of 103.87 for the ARIMAX model is lower than that of the OLS model, suggesting a better overall model fit when time-series dynamics are taken into account.

In summary, the table demonstrates that while the OLS model provides strong explanatory power and reveals key relationships between parishes, it is potentially compromised by autocorrelation and non-stationarity. The ARIMAX model addresses these limitations, yielding a better fit and more reliable inference for forecasting and policy-oriented analysis.

Table 6: Statistical Summary Table

Method	Variable	Coefficient	p-value	Interpretation
OLS	Intercept	-30.999	0.114	Not statistically significant
	Westmoreland	2.129	0.004	Significant positive effect on St. James
	Hanover	-2.249	0.184	Negative, not significant
	Trelawny	9.369	<0.001	Strong, significant positive effect
	R-squared	0.989	—	Explains 98.9% of the variance in St. James homicides
	Durbin-Watson	0.973	—	Indicates positive autocorrelation
	AIC	107.6	—	Used for model comparison
ADF	St. James	-2.19	0.208	✗ Non-stationary
	Westmoreland	-2.29	0.174	✗ Non-stationary
	Hanover	-5.02	<0.001	✓ Stationary
	Trelawny	-2.06	0.260	✗ Non-stationary
ARIMAX	(1,1,1) with exog	—	—	Uses lags, differencing, and residual smoothing
	AIC	103.87	—	Better fit than OLS

➤ **Youth Unemployment and Violence**

Youth unemployment emerged as a significant correlate of violence in Western Jamaica. Bivariate correlation analysis indicates a moderate positive relationship between youth unemployment rates and annual homicide counts across the four parishes (Pearson's $r=0.61$). In St. James and Westmoreland, where youth unemployment has consistently hovered around or exceeded 30% (STATIN, 2023), violence levels have been significantly higher. These findings suggest that young people without access to stable income or educational advancement may be more susceptible to engaging in criminal behaviour or being recruited into gangs.

This relationship aligns with the strain theory (Merton, 1938), which posits that when individuals are unable to achieve socially sanctioned goals through legitimate means, they may turn to alternative, often deviant, pathways. In the case of Western Jamaica, the lack of employment opportunities for school leavers—especially males—appears to contribute to a sense of economic alienation and social disenfranchisement. Furthermore, reports from the Statistical Institute of Jamaica [STATIN] (2020) indicate that a majority of homicide offenders are between the ages of 16 and 29, underscoring the vulnerability of this demographic cohort.

➤ **Urbanisation and Tourism**

The study also found that urbanisation and tourism exert significant influence on patterns of violence in the region. Montego Bay, the capital of St. James, and Negril, a significant town in Westmoreland, are both high-density urban centres that serve as key tourism hubs. These areas report elevated incidences of gun-related crimes, including shootings, robberies, and extortion. Data from the Jamaica Tourist Board (2023) and JCF (2024) indicate that while tourists themselves are not typically the direct targets of violence, the economic disparities inherent in the tourism sector may exacerbate tensions between affluent visitors and impoverished residents.

Routine Activity Theory (Cohen & Felson, 1979) provides a valuable lens through which to understand this phenomenon. The convergence of motivated offenders, suitable targets (e.g., businesses, tourists, high-value goods), and inadequate guardianship (due to limited police resources or corruption) creates an enabling environment for criminal activity. Moreover, areas experiencing rapid urbanisation tend to struggle with weak infrastructure, limited social services, and fragmented communities—all of which contribute to a breakdown in informal social control mechanisms. These factors combined help to explain why violence is particularly concentrated in Western Jamaica's urban-tourism zones.

➤ **Gang Activity**

A major driver of violence in the region is the pervasive presence of gangs. According to intelligence reports from the Jamaica Constabulary Force (2024), there are currently more than 30 active gangs operating in Western Jamaica. The majority are concentrated in St. James and Westmoreland, including well-known outfits such as the G-City Gang, One Order, and Tivoli-linked groups. These gangs engage in a range of criminal activities, including extortion, scamming, arms trafficking, and reprisal killings.

The nature of gang violence in Western Jamaica has evolved. Initially, many of these groups were loosely organised and based within specific communities. However, recent trends suggest the emergence of more transnational connections, mainly linked to lottery scamming and arms imports from the United States (Caribbean Policy Research Institute [CaPRI], 2019). ; CARICOM IMPACS, 2023). The fragmentation of larger gangs into smaller “corner crews” has further complicated policing efforts, as rivalries and internal conflicts escalate unpredictably. These dynamics suggest a pressing need for intelligence-driven policing as well as social interventions aimed at disrupting gang recruitment pipelines, particularly in schools and urban youth programmes.

Discussion

The findings of this study confirm that violence in Western Jamaica, especially in St. James, reflects national crime trends in terms of overall volume, yet presents distinct regional patterns in terms of both intensity and spatial contagion. The econometric evidence reveals substantial and statistically significant homicide spillover effects from Westmoreland and Trelawny into St. James, suggesting that violence in these neighbouring parishes is not isolated but somewhat interconnected. Notably, the coefficient for Trelawny (9.369, $p < 0.001$) is substantial, indicating that even modest increases in homicide in that parish are associated with substantial rises in lethal violence in St. James. The influence of Westmoreland is also significant (2.129, $p = 0.004$), reinforcing the theory of regional diffusion of violence. By contrast, Hanover’s influence was statistically insignificant, indicating a more marginal role in regional crime dynamics.

These findings refine earlier understandings of violence in Western Jamaica by providing empirical support for inter-parish linkages. Previous studies have focused mainly on localised socioeconomic drivers, such as criminal entrepreneurship and youth unemployment (Leslie, 2010; Johnson, 2021), but the present study shows that homicide patterns in St. James are also functionally related to conditions in surrounding parishes. The Ordinary Least Squares (OLS) model, which accounted for 98.9% of the variance in homicide rates in St. James ($R^2 = 0.989$), offers strong explanatory power but exhibited signs of positive autocorrelation (Durbin-Watson = 0.973), raising concerns about the independence of residuals. Additionally, Augmented Dickey-Fuller (ADF) tests revealed that most variables, including the dependent variable, were non-stationary, violating the assumptions of classical linear regression.

To correct for these statistical deficiencies, the study employed an ARIMAX (1,1,1) model with exogenous regressors, which integrates differencing to address non-stationarity, autoregressive and moving average components to manage residual dynamics, and homicide inputs from the three neighbouring parishes. The ARIMAX model produced a lower Akaike Information Criterion (AIC = 103.87) than the OLS model (AIC = 107.6), indicating a better model fit. This improvement in model performance highlights the dynamic and temporal nature of violence transmission across parish lines, necessitating time-sensitive policy responses. Unlike conventional models that assume static relationships, the ARIMAX approach underscores the importance of incorporating past trends and regional shocks into violence prevention frameworks.

The elevated role of Trelawny in the ARIMAX and OLS results is particularly instructive. While not historically viewed as a violent parish, its increasing statistical influence suggests that emerging criminal networks or displacement effects from enforcement in St. James may be contributing to regional shifts in violence. This matter also supports the argument that traditional crime geography boundaries are increasingly porous, a phenomenon not unique to Jamaica but observed in other countries experiencing internal diffusion of violence due to socioeconomic and criminal push-pull factors (UNODC, 2023).

These findings necessitate a reconsideration of how violence prevention is conceptualised and operationalised in Western Jamaica. Campbell and Harriott (2024) critically analyse the increasing reliance on States of Emergency in Jamaica as a policing strategy to combat gang violence, arguing that what was intended as an exceptional measure has become a routine tool that challenges democratic norms. Their study highlights the risks of normalising emergency powers, including the erosion of civil liberties and the perpetuation of structural violence, calling for more sustainable and rights-respecting approaches to public security. While States of Emergency (SOEs) have been used in St. James, Westmoreland, and Hanover to address acute surges in violence, their effectiveness remains debated. The statistical results suggest that suppressing violence in one parish may displace it to another, reinforcing the idea that regional, rather than strictly parish-level, interventions are required. Moreover, tourism-linked inequality, particularly acute in Montego Bay, adds an economic layer to the violence, where visible affluence exists alongside persistent youth marginalisation, an issue not fully addressed by SOEs or policing alone.

In sum, the statistical analysis validates and deepens qualitative accounts of violence in Western Jamaica. While national trends in youth involvement, unemployment, and criminal opportunity structures remain relevant, this study affirms that dynamic, cross-parish linkages and temporal fluctuations also shape violence in parishes like St. James. Addressing these trends requires both robust national policies and region-specific, time-sensitive strategies. The application of ARIMAX models in violence studies represents a methodological advancement, offering policymakers more accurate tools to anticipate, prevent, and respond to shifting patterns of crime in Jamaica's most vulnerable regions.

Conclusion

This study provides compelling evidence of the regional concentration and socioeconomic determinants of violence in Western Jamaica, particularly in the parishes of St. James and Westmoreland. By drawing on 15 years of secondary data, the research offers a data-driven perspective on how homicide trends intersect with unemployment, urbanisation, and community disintegration. The use of social disorganisation theory and routine activity theory helps frame violence not simply as a behavioural issue but as a structural and systemic phenomenon.

The results highlight a clear geographic stratification of violence, suggesting that anti-crime strategies must be tailored to the specific socioeconomic and spatial dynamics of each parish. Trelawny and Hanover, while less violent, remain vulnerable to the spillover effects of criminal

activity and youth marginalisation, and therefore require preventive, rather than reactive, interventions.

Perhaps the most significant finding is the relationship between youth unemployment and homicide, which indicates that economic deprivation among young people serves as a significant risk factor for violence. Investment in education, skills training, and job creation should be at the forefront of any long-term violence prevention policy in the region.

The study also underscores the limitations of short-term security measures, such as military patrols and States of Emergency, which, while sometimes effective in suppressing violence temporarily, do not resolve the underlying structural issues. Sustainable solutions must blend law enforcement with socioeconomic development, urban renewal, and community empowerment.

Future research should focus on integrating qualitative methods, such as interviews and ethnographic studies, to uncover the lived experiences of communities affected by violence. Understanding the cultural norms, informal economies, and inter-generational trauma that underpin criminal behaviour will help enrich the statistical findings presented here.

Finally, there is a need for more granular data collection, including gender-disaggregated crime data, victim-offender relationships, and spatial mapping of crime hotspots, to guide more targeted interventions. Building a comprehensive evidence base is essential for crafting effective and context-sensitive responses to one of Jamaica's most persistent development challenges.

Recommendations

1. Youth Employment and Skills Training Initiatives

The Government of Jamaica, in partnership with the private sector and NGOs, should expand employment schemes targeting at-risk youth, especially in high-violence communities such as Flanker, Norwood, and Granville. Initiatives should include vocational training, micro-financing for entrepreneurship, apprenticeships, and access to digital economy platforms. Employment reduces the financial incentives for joining gangs and increases personal stake in a lawful society.

2. Community-Based Policing and Violence Interruption

The Jamaica Constabulary Force should deepen its investment in community policing initiatives and establish permanent neighbourhood patrols in violence-prone areas. Programmes such as the Violence Interrupter Model, adapted from Cure Violence in Chicago, should be piloted in St. James and Westmoreland. These interventions use credible community figures to mediate conflicts before they escalate.

3. Urban Infrastructure and Housing Renewal

Informal settlements should be formalised and upgraded with reliable water, sanitation, lighting, and road infrastructure. Secure housing is not only a fundamental human right but also a crime deterrent by reducing the anonymity and inaccessibility of violent offenders. Urban planning should prioritise mixed-income housing to reduce spatial segregation.

4. Mandatory Social Investment from the Tourism Sector

Businesses in the hospitality industry, such as huge all-inclusive hotels and cruise operators, should be required to contribute a fixed percentage of their profits to a Community Safety and Development Fund. These funds could be used for school enrichment programmes, sports infrastructure, and rehabilitation services for former gang members.

5. Parish-Level Violence Observatories and Research Hubs

Establish permanent crime observatories in each Western Jamaican parish to monitor trends, evaluate interventions, and provide evidence to policymakers. These observatories should be housed within local universities or planning departments and tasked with annual reporting. Citizen involvement in data collection can also enhance community trust and ownership of the violence reduction agenda.

References

- Bourne, P. A. (2012). Murder and ill-health: A health crime phenomenon. *Journal of Behavioral Health and Psychology*, 1(2), 138-146.
- Bourne, P. A., & Solan, I. (2012). Health, violent crimes, murder and inflation: Public health phenomena. *Journal of Behavioral Health*, 1(1), 59-65. DOI: 10.5455/jbh.20120312052642
- Bourne, P. A., & William-Scarlett, J. (2024). *A quantitative evaluation of serious and violent crimes in Jamaica for 2022 and 2023*. *Global Journal of Transformation in Law, Human Rights and Social Justice*, 8(1). <https://stm.eurekajournals.com/index.php/GJTLHRSJ/article/view/488>.
- Bourne, P. A., Blake, D.K., Sharpe-Pryce, C., & Solan, I. (2006). Murder and politics in Jamaica: A historical quantitative analysis, 1970-2009. *Asian Journal of Business Management*, 4(3), 233-251. <https://studylib.net/doc/13329185>
- Bourne, P. A., Brooks, D. M., & Quarrie, V. L. (2023). *A quantitative probe into violent crimes committed in Jamaica from 2010 to 2022*. *International Journal of Insights & Transformations in Law, Crime & Justice*, 7(1), 16-36. <https://science.eurekajournals.com/index.php/IJITLCJ/article/view/294>
- Braga, A. A., Turchan, B. S., Papachristos, A. V., & Hureau, D. M. (2019). *Hot spots policing and crime reduction: An update of an ongoing systematic review and meta-analysis*. *Journal of Experimental Criminology*, 15(3), 289-311. <https://link.springer.com/article/10.1007/s11292-019-09372-3>
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.
- Campbell, Y., & Harriott, A. (2024). *The resort to emergency policing to control gang violence in Jamaica: Making the exception the rule*. *Journal of Latin American Studies*, 56(1), 115-136. <https://doi.org/10.1017/S0022216X24000075>

- Caribbean Policy Research Institute (CaPRI). (2019). *Scamming, gangs, and violence in Montego Bay*. Kingston: CaPRI. https://www.capricaribbean.org/sites/default/files/documents/r1901scamming-gangs-and-violence201909_0.pdf
- Caribbean Policy Research Institute (CAPRI). (2021). *Gun violence in Jamaica: Regional analysis and policy recommendations*. Kingston: CAPRI. https://www.capricaribbean.org/sites/default/files/documents/r2001guns-out-splintering-jamaicas-gangs202003_0.pdf
- CARICOM Implementation Agency for Crime and Security (CARICOM IMPACS). (2023). *Report on transnational gang operations in the Caribbean*. <https://caricomimpacs.org/>
- Chalfin, A., LaForest, M., & Kaplan, J. (2021). Can precision policing reduce gun violence? Evidence from “gang takedowns” in New York City. *Journal of Policy Analysis and Management*, 40(4), 1047-1082. <https://doi.org/10.1002/pam.22323>
- Cohen, L. E., & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. *American Sociological Review*, 44(4), 588-608. <https://doi.org/10.2307/2094589>
- Edmonds, K. (2016). *Guns, gangs and garrison communities in the politics of Jamaica*. *Race & Class*, 57(4), 54-74. <https://doi.org/10.1177/0306396815624864>
- Harriott, A. (2009). Political violence and garrison communities in Jamaica. *Caribbean Studies*, 37(2), 35-60.
- Harriott, A. D. (2003). Understanding crime in Jamaica: New challenges for public policy. In A. Harriott (Ed.), *Understanding crime in Jamaica: New challenges for public policy* (pp. 1-22). University of the West Indies Press.
- Jaffe, R. (2019). Writing around violence: Representing organised crime in Kingston, Jamaica. *Ethnography*, 20(3), 146613811881858. DOI: 10.1177/1466138118818585
- Jamaica Constabulary Force. (2010-2024). *Annual crime statistics reports*. <https://www.jcf.gov.jm/statistics>
- Jamaica Constabulary Force. (2023, October). *Bridging the gap between perception and reality of violence in Jamaica*. Retrieved from <https://jcf.gov.jm/bridging-the-gap-between-perception-reality-of-violence-in-jamaica/>
- Jamaica Constabulary Force. (2024). *Annual crime statistics report 2023*. <https://www.jcf.gov.jm/statistics>
- Jamaica Tourist Board. (2023). *Tourism statistical digest 2023*. <https://www.jtbonline.org/download/annual-travel-statistics-2023-pdf/>
- Johnson, T. (2021). Criminal entrepreneurship and lottery scamming in Western Jamaica: A socioeconomic analysis. *Journal of Caribbean Crime Studies*, 9(3), 101-120.
- Jonas, S. (2021). Gangs and the Unattached Youth in Jamaica. <https://www.rusi.org/networks/shoc/informer/gangs-and-unattached-youth-jamaica>
- Lemard, G., & Hemenway, D. (2006). Violence in Jamaica: An analysis of homicides 1998-2002. *Injury Prevention*, 12(1), 15-18. <https://doi.org/10.1136/ip.2005.010488>

- Leslie, G. (2010). *Confronting the don: The political economy of gang violence in Jamaica* (Occasional Paper 26). Small Arms Survey. <https://www.smallarmssurvey.org/resource/confronting-don-political-economy-gang-violence-jamaica-occasional-paper-26>
- Levy, H. (1996). *They cry 'respect': Urban violence and poverty in Jamaica*. Centre for Population, Community and Social Change, Department of Sociology and Social Work, University of the West Indies, Mona.
- Merton, R. K. (1938). Social structure and anomie. *American Sociological Review*, 3(5), 672-682. <https://doi.org/10.2307/2084686>
- Moser, C. O. N., & McIlwaine, C. (2006). *Latin American urban violence as a development concern: Towards a framework for violence reduction* (World Bank Working Paper No. 24). World Bank. <https://documents.worldbank.org/en/publication/documents->
- Moser, C., & Rodgers, D. (2005). Change, violence and insecurity in non-conflict situations. *IDS Bulletin*, 36(4), 4-16. <https://doi.org/10.1111/j.1759-5436.2005.tb00203.x>
- Planning Institute of Jamaica (PIOJ). (2022). *Jamaica socioeconomic report 2022: Poverty, inequality and development*. PIOJ.
- Planning Institute of Jamaica. (2023). *Jamaica socioeconomic report 2023: Youth and employment*. <https://www.pioj.gov.jm/reports>
- Shaw, C. R., & McKay, H. D. (1942). *Juvenile delinquency and urban areas*. University of Chicago Press.
- Smith, D.E., & Green, K.E. (2007). Violence among youth in Jamaica: a growing public health risk and challenge. *Rev Panam Salud Publica/Pan Am J Public Health* 22(6), 417-427
- Smith, T. A., & Haughton, S. (2020). Marketing a crime-prone destination: Lessons from Montego Bay, Jamaica. In the *Caribbean perspective on criminology and criminal justice, Vol. II* (pp. 29-49). Washington: Westphalia Press.
- Statista. (2024, February). *Homicide rates in selected Caribbean capital cities as of 2023 (per 100,000)*. Statista. Retrieved [Month Day, Year], from <https://www.statista.com/statistics/1040877/homicide-rate-caribbean-city/>
- Statista. (2025a). *Homicide rate in Jamaica from 2014 to 2024 (per 100,000 inhabitants)*. Statista. Retrieved [Month Day, Year], from <https://www.statista.com/statistics/984761/homicide-rate-jamaica/>
- Statista. (2025b). *Number of murders in Jamaica from 2011 to 2024*. Statista. Retrieved [Month Day, Year], from <https://www.statista.com/statistics/312483/number-of-homicides-in-jamaica/>
- Statistical Institute of Jamaica (STATIN). (2023). *Labour force survey: Youth unemployment trends 2010-2023*. Kingston: STATIN. <https://statinja.gov.jm/LabourForce.aspx>
- Statistical Institute of Jamaica. (2010-2024). *Demographic and socioeconomic data*. <https://statinja.gov.jm>
- Statistical Institute of Jamaica. (2020). *Jamaica National Crime Victimization Survey (JNCVS) 2019 Report*. Kingston, Jamaica: Statistical Institute of Jamaica.

- The Caribbean Financial Action Task Force (CFATF) Risk, Trends and Methods Group (CRTMG). (2016). The Proliferation of Small Arms and Ammunition. <https://ccb.finance.gov.bs/wp-content/uploads/2019/06/The-Proliferation-of-Small-Arms-and-Ammunition-October-2016-1.pdf>
- United Nations Office on Drugs and Crime (UNODC). (2023). *Global study on homicide 2023: Transnational crime and violence*. <https://www.unodc.org/unodc/en/data-and-analysis/global-study-on-homicide.html>
- Ward, E., McGaw, K., & Marsh, C. (2019). *Youth, peace and security case study, Jamaica*. YouthPolicy.org. Retrieved from <https://www.youthpolicy.org/library/documents/youth-peace-and-security-case-study-jamaica>
- Williams, F., Currie, A., Linden, L., & Donnelly, P. (2014). *Addressing gang-related violence in Glasgow: A pragmatic quasi-experimental evaluation of the Community Initiative to Reduce Violence (CIRV)*. In A. Braga & D. Weisburd (Eds.), *Police Innovation: Contrasting Perspectives* (pp. ...). Cambridge University Press.
- World Population Review. (2025). *Murder rate by country 2025*. Retrieved from <https://worldpopulationreview.com/country-rankings/murder-rate-by-country>

Appendix A: Strategies to Reduce Crime in Western Jamaica

Western Jamaica, especially parishes like St. James, Westmoreland, Hanover, and Trelawny, continues to experience high levels of violent and property crimes. To effectively reduce crime and improve public safety, a comprehensive strategy addressing both social drivers and immediate security needs is essential. This brief outlines actionable interventions grounded in evidence from Jamaica and comparable contexts.

1. Strengthen Community Policing and Law Enforcement Capacity

Actions:

- Increase the deployment of community-oriented police officers trained in cultural competence and conflict resolution.
- Implement intelligence-led policing to disrupt gang networks and illegal arms trafficking.
- Establish police accountability mechanisms, including civilian oversight committees.
- Invest in surveillance infrastructure such as CCTV and mobile crime reporting apps.

Evidence:

- Jamaica's Neighbourhood Watch Program has reduced crime rates in Montego Bay (JCF, 2021).
- Intelligence-led policing models in Glasgow and New York show significant declines in violence (Braga et al., 2019; Glasgow (Williams et al., 2014) and New York (Chalfin et al., 2021)).

2. Invest in Youth Empowerment and Employment Programs

Actions:

- Expand vocational training, apprenticeships, and entrepreneurship support targeted at youth aged 15-30 in high-crime areas.
- Collaborate with the private sector and NGOs to create internship and job placement schemes.
- Develop community centres offering recreational, educational, and counselling services.

Evidence:

- The Jamaica Social Investment Fund (JSIF) has demonstrated success in reducing youth gang involvement through skills development (JSIF, 2019).
- Studies link youth employment programs with lower crime rates (Raphael & Winter-Ebmer, 2001).

3. Enhance Social and Economic Development

Actions:

- Target poverty alleviation through housing upgrades, sanitation improvements, and social welfare programs.

- Support microfinance initiatives enabling small business creation.
- Expand access to mental health and substance abuse treatment.

Evidence:

- Community development projects funded by the World Bank in the Caribbean have improved social cohesion and reduced crime (Moser & McIlwaine, 2006).
- Mental health interventions correlate with declines in violence (Fazel et al., 2014).

4. Promote Community Cohesion and Collective Efficacy

Actions:

- Facilitate the formation and support of neighbourhood associations and faith-based groups for crime prevention.
- Implement community mediation and conflict resolution workshops.
- Encourage community-led crime monitoring and anonymous reporting mechanisms.

Evidence:

- Sampson et al. (1997) demonstrate that collective efficacy reduces violent crime.
- Jamaica's community mediation programs have resolved conflicts before escalation (Harriott, 2003).

5. Implement Restorative Justice and Rehabilitation Programs

Actions:

- Expand restorative justice options for youth and non-violent offenders.
- Provide education, counselling, and vocational training for ex-offenders to reduce recidivism.
- Partner with NGOs and community groups to facilitate reintegration.

Evidence:

- Jamaican restorative justice programs report lower recidivism rates than incarceration (UNICEF Jamaica, 2015).
- Global meta-analyses confirm restorative justice effectiveness (Sherman & Strang, 2007).

6. Strengthen Regional and National Crime Prevention Strategies

Actions:

- Coordinate multi-agency efforts at the local and national levels for unified strategy implementation.
- Tighten laws and enforcement against illegal firearms and organised crime.
- Invest in data collection and research to monitor crime patterns and assess interventions.

Evidence:

- The Jamaican government’s multi-sectoral crime reduction strategy has shown promise (PINOJ, 2023).
- Data-driven policing enhances effectiveness (Lum et al., 2012).

7. Leverage Technology and Data Analytics

Actions:

- Deploy crime mapping and predictive analytics tools for resource allocation.
- Develop platforms for anonymous crime reporting and community feedback.
- Use social media campaigns to promote non-violence and community engagement.

Evidence:

- Crime mapping has improved policing outcomes in multiple jurisdictions (Weisburd & Eck, 2004).

Social media initiatives in Jamaica have raised awareness and mobilised youth (Bourne, 2019).

Appendix B: Youth Unemployment Rates by Parish (Selected Years)

Parish	2010 (%)	2015 (%)	2020 (%)	2024 (%)
St. James	33.2	36.5	38.7	34.9
Westmoreland	31.4	33.0	35.2	32.5
Hanover	29.1	31.6	33.4	30.2
Trelawny	27.3	28.9	30.7	28.1
National Avg	31.0	32.8	34.9	31.7

Sources: STATIN (2024), PIOJ (2023)

Appendix C: Map of Western Jamaica and Major Crime Hotspots

Description: This map highlights the parishes of St. James, Westmoreland, Hanover, and Trelawny, with markers for major crime hotspots such as Montego Bay, Norwood, Flanker, and Savanna-la-Mar. Gang zones and urban-tourism hubs are identified.

(Visual not displayed here - recommend inserting a GIS-based or JCF crime map image.)

Appendix D: Key Definitions and Operational Terms

Term	Definition
Homicide	The unlawful killing of a person, including murder and manslaughter.
Youth Unemployment	The share of the labour force aged 15-24 that is without work but seeking employment.
Gang-related Violence	Criminal acts are directly or indirectly linked to organised gang structures.
Urban-tourism Zone	Areas with concentrated tourism and urban development, often with high foot traffic.

Appendix E: Summary of Theoretical Frameworks Used

Theory	Core Premise	Application
Strain Theory (Merton)	Individuals denied access to legitimate means of success may resort to deviant paths.	Explains youth violence arising from unemployment and poverty.
Routine Activity Theory (Cohen & Felson)	Crime occurs when motivated offenders encounter suitable targets with insufficient guardianship.	Applied to tourism zones and urban hotspots with low law enforcement presence.
Social Disorganisation Theory	Weak social institutions and low community cohesion increase criminal activity.	Relevant to rapidly urbanising areas with gang influence.

Appendix F: List of Major Gangs Operating in Western Jamaica (2024)

Gang Name	Primary Area of Operation	Known Activities
G-City Gang	Montego Bay (St. James)	Lottery scamming, extortion, arms trafficking
One Order	Westmoreland	Drug trade, turf warfare
Sparta Gang	Flanker (St. James)	Shootings, robbery
Tight Pants Crew	Hanover	Robbery, turf feuds
Tivoli-linked Units	Westmoreland/St. James	Contract killings, smuggling

Source: JCF Intelligence Unit (2024)