Criminal Justice Article Review: Aggravated Assault

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Abstract: The study uses geographically weighted regression (WGR) and the emerging hot spot analysis (EHSA) methodologies to examine the impact of immigrant and ethnic and racial concentration on patterns of aggravated assault and larceny in Miami.
Keywords: Assault; Crime; Social disorganization

1. Article summary

The article examines temporal and spatial patterns of neighborhood crimes such as larceny and aggravated assault from 2007 and 2015 in Miami. The research method is designed to explain the simultaneous decrease in the United States' overall crime rate and an increase in several metropolitan regions. Existing political and public literature on the issue attributes increased crime rates to immigration by rational and ethnic minorities, Latinos, who create deviant subcultures, demonstrate higher crime involvement, and drive antisocial behavior (Bunting et al., 2018). However, modern literature refutes this argument, indicating an inconsistent relationship between a neighborhood's racial and immigrant concentration and high crime rates. This relationship's uncertainty demands a comprehensive review of the relationship between immigration and racial concentration over an extended period and a larger sample to develop accurate crime patterns over time.

The study uses geographically weighted regression (WGR) and the emerging hot spot analysis (EHSA) methodologies to examine the impact of immigrant and ethnic and racial concentration on patterns of aggravated assault and larceny in Miami. The researcher downloaded crime data from 2007 to 2015 from the Miami-Dade Police Department (MDPD), Miami-Date GIS services, and the United States Census Bureau, which revealed high incidences of larceny, followed by aggravated assaults out of the seven types of crimes identified. Bunting et al. (2018) used the EHSA1 technique to investigate the spatial clustering and patterned incidences of the two crimes across Miami-Dade County. The emerging hot spot analysis (EHSA) method is a technique that evaluates and generates spatial patterns of clustering trends of specific regions over time in terms of persistent, sporadic, intensifying, cold, historical, and hot spots. The methodology consists of two parameters, an analysis and a space-time cube, a netCDF file with XY-coordinates for space and a Z-coordinate for time (Bunting et al., 2018). The researchers calculate EHSA using the time cube over 12 months through the four types of hotspots, consistent, persistent, intensifying, and new, to enable an adequate visual analysis. The technique generates spatial clustering that enables the authors to analyze extensive sample size data over an extended period effectively. Next, the GWR facilitated adequate investigations of the impact of different sociodemographic variables on high crime incidences (Bunting et al., 2018). Unlike the EHSA, the GWR accounts for spatial non-stationarity in the interactions between different space variables. The article specifies that "the parameter estimates are calculated with a weighting method in which the contribution of an observational site to the analysis is weighted in accordance with its spatial proximity to the specific location being considered," (Bunting et al., 2018 pg. 38). This means that GWR equations and calculations for aggravated assault and larceny are not constant but dependent on relative location. Consequently, the technique analyzes crime incidences based on relative location, facilitating its successful use in investigating spatial patterns of violent crimes in different neighborhoods such as Miami and Portland.

The research outcomes indicate a peak in larceny-based crimes during the day and aggravated assaults near midnight. Notable differences in the crimes' temporal patterns on the weekends and weekdays have equally been recorded (Bunting et al., 2018). For instance, both crimes peaked close to midnight on the weekends and near midday during weekdays. The EHSA technique identified two primary persistent and intensifying hot spots for aggravated assault, one near Palmetto Bay and the other near Liberty City. The hot spots were more dispersed for larceny. According to the GWR analysis, the ethnic diversity index had the most significant impact on high crime incidences, sequentially followed by poverty and the population's median age (Bunting et al., 2018). Therefore, the study finds a positive correlation between high crime incidences and the ethnic diversity index. However, it attributes this relationship to the resulting distrust between immigrants, such as between blacks and Hispanics, increasing hatred

and crime rates.

2. The implication of the results

The research optimally combines the EHSA and the geographically weighted regression methodologies to examine the relationship between neighborhoods' ethnic, racial, and immigrant concentration and high crime rates. The research outcomes affirm the theoretical models discussed in the literature review, such as the social disorganization theory, proving research methods' reliability. (Bunting et al., 2018) The social disorganization theory attributes high crime rates to residential inequality, ethnic and racial heterogeneity, and economic disadvantage. Increased social cohesion and collective efficacy in witnessing and responding to the crimes may resolve the problem. The EHSA and GWR analytic outcomes confirm the social disorganization theory's provisions, arguing that population heterogeneity limits cohesive neighborly bonds, reducing people's likelihood of intervening in criminal incidences. Therefore, the article attributes the positive relationship between immigrant concentration and high crime rates to population diversity rather than a minority ethnic or racial group's inclination to crime.

While the study offers comprehensive analytic data on the causes of high crime rates in ethnically and racially diverse and concentrated regions, its conclusion may be inaccurate. Primarily, the authors declare hid their intention to contribute to the conflicting literature study on whether high crime incidences in ethnically concentrated neighborhoods result from Latinos' predisposition to criminal involvement and formation of deviant subcultures (Bunting et al., 2018). Instead, the study analyzes data from diversely-populated neighborhoods with multiple languages and racial and ethnic backgrounds, making it challenging to examine the accuracy of the ongoing conflict regarding Latinos' predisposition to crime. The literature review equally recognizes the routine activity theory as a better representation and predictor of the relationship between the research variables than the social disorganization theory (Bunting et al., 2018). Yet the EHSA and GWR analyses confirm the provisions of the latter. The routine activity theory attributes high crime rates to the availability of motivated offenders, valuable property, and incapable guardians to intervene in crime over time. While spatial regression models demonstrate a preference for routine activity over the social disorganization theory, both theories converge on the need for racial heterogeneity. However, the authors' spatial regression model reflected the social disorganization theory. Nonetheless, the study offers valuable insights into reducing crime rates in racially and ethnically diverse and immigrant-concentrated neighborhoods.

3. Recommendations

The researchers can make the study more conclusive by extending the study to ethnically and racially dominant areas. For instance, conducting a comparative study in areas with a predominantly black, Latina, or white population may offer conclusive results on whether the immigrant population is predisposed to a life of crime. The authors have also examined critical issues that determine a geographic location's susceptibility to criminal activities, including poverty and structural and systemic inequality (Bunting et al., 2018). Future research can complement this study by applying EHSA and GWR analyses to predominantly Latina, black, or white neighborhoods, resulting in more conclusive results on the relationship between the two study variables. An extensive examination of sustainable solutions to structural and systemic inequality and poverty may also expand the study's knowledge area by prompting systemic solutions to optimal coexistence among heterogeneous populations.

References

1 Bunting, R. J., Chang, O. Y., Cowen, C., Hankins, R., Langston, S., Warner, A., Yang, X., Louderback, E.R., & Roy, S. S. (2018). Spatial patterns of larceny and aggravated assault in Miami–Dade County, 2007–2015. *The Professional Geographer*, *70*(1), 34-46.