ORIGINAL RESEARCH

Journal of
COMMUNITY SAFETY & WELL-BEING

Are neighbourhood parks crime generators? A nationwide study

Ginger Cameron*,† and Kathryn G. Kelly‡

ABSTRACT

This research investigates the relationship between neighbourhood parks and crime, exploring park conditions, activities, landscaping, and socioeconomic factors. Evaluating 351 parks across 45 states using the BRAT-direct observation instrument and national crime data, the study aims to discern links between parks and crime, emphasizing the impact of park attributes and surrounding income levels. Contrary to some prevailing theories, no significant correlation was found between park conditions or activities and crime rates. However, a moderate correlation emerges between burglary rates and the poverty levels of the surrounding area, and a negative correlation between burglary and median income of the area, suggesting that while parks themselves may not be crime generators, they may facilitate burglaries of opportunity due to increased foot traffic. The findings prompt a re-evaluation of existing theories, emphasizing the need for tailored safety measures during peak park usage times.

Key Words Neighbourhood parks; crime; park conditions; crime generators.

INTRODUCTION

Neighbourhood parks are important and can provide many benefits. Parks bring people together, enhance the community, and contribute to the feel of the neighbourhood and city. Park functions differ; some provide recreational activities, and some simply provide aesthetic appeal. The many benefits of parks listed by the American Planning Association include community revitalization and engagement, economic development, providing green infrastructure, improving public health, promoting tourism, and managing climate change (American Planning Association, 2023).

However, the association between neighbourhood parks and crime has long been disputed and researched. Positively, urban parks tend to be related to higher real estate values (Troy & Grove, 2008; Voicu & Been, 2008). The proximity of parks can raise the home value by an estimated 20% for passive parks (Crompton & Nicholls, 2020). They also found that parks that attract a large number of people raise the home values of homes in the surrounding two or three blocks, but to a lesser extent (about 10%) (Crompton & Nicholls, 2020).

And adding green space has also been found to lower crime (Shepley et al., 2019). Research shows that the mere presence of trees, parks, and other natural areas in urban settings reduces the incidence of violent crime (Shepley et al., 2019). A literature review by Shepley et al. (2019) indicated that over 100 studies have connected the benefits of green space and nature to human well-being and health. The authors further explored the impact of green space on violence and found that green space reduces violent crime.

The Human-Environment Research Laboratory of the University of Illinois at Urbana-Champaign studied the green space next to Chicago public housing and found that the neighbourhoods adjacent to green space generated fewer violent and property crimes, as cited in American Planning Association (2023). Furthermore, the authors found that green spaces provided places for neighbours to form social ties and protect each other (American Planning Association, 2023). A deteriorating infrastructure is considered a crime magnet (Kelling & Wilson, 1982). Larson and Ogletree (2019) and Ogletree et al. (2022) cite many examples of significantly lower crime levels when city parks with high crime rates underwent revitalization.

Another prevailing theory has been that neighbourhood parks are crime generators (Newton, 2018). Newton (2018) describes parks as a macro crime generator. Macro crime generators are places where many people, including a criminal element, congregate. Newton further distinguishes between areas that are crime generators and crime attractors, a notion originally offered by Brantingham and Brantingham (1995). The distinction depends on the motivation of the perpetrator.

Correspondence to: Kathryn G. Kelly, Telephone: 315-720-5268. **E-mail:** kkelly3@purdueglobal.edu

To cite: Cameron, G. & Kelly K. G. (2024). Are neighbourhood parks crime generators? A nationwide study. *Journal of Community Safety and Well-Being*, 9(4), 193–196. https://doi.org/10.35502/jcswb.411

SG PUBLISHING Published by SG Publishing Inc. CSKA Official publication of the Community Safety Knowledge Alliance.

Newton's (2018) theory states that places with a bad reputation attract crime and are referred to as crime attractors. Examples are districts with many bars, drugs, prostitution, check cashing stores, homeless shelters, or unsecured parking areas. In other crowded places, such as parks, crime just happens opportunistically (Newton, 2018). Parks can fall into either category, either a crime generator or a crime attractor, or they can be neutral areas.

Groff and McCord's (2012) research supported the idea that parks can be neutral areas. Their study, which focused on Philadelphia parks, revealed that the parks had higher crime rates than other parts of the city, which would make them crime generators. However, the parks with more activity generators (e.g., recreational centers, pools, playgrounds, night lighting, etc.) experienced less crime than the parks with fewer activity generators (Groff & McCord, 2012). This difference was attributed to the presence of features such as basketball courts, sports fields, and playgrounds that attracted legitimate users and more "eyes on the street" (Jacobs, 1961). Jacobs (1961) noted that people feel safe and secure in places where many people congregate. Since parks tend to be used during the day, they attract more legitimate users. In short, Groff and McCord (2012) concluded that the design of the park, the mix and number of activities, and the surrounding environment all contributed to less crime.

Additional researchers have also suggested that crime generation associated with parks is related to the attributes of the park itself, specifically the number of activity options available at the park (Lockwood, 2007; Newton, 2018; Perkins et al., 1993; Wilcox et al., 2004). Other researchers suggest that the income level of the area where the park is located is the stronger determinant of crime (Groff & McCord, 2012). And some theories say that the landscaping is the key factor (Troy & Grove, 2008), while others suggest urban encroachment (Wynveen et al., 2007). Finally, the relationship between crime and poverty is well established. As far back as 1974, the Nobel Prize winner, Becker (1974), posited that all crime is economic. Quednau's (2021) more recent analysis of the American Community Survey Census database found a significant correlation between the poverty rate and the violent crime rate. How income levels transfer to the relationship between neighbourhood parks and crime is less clear.

Using the BRAT-direct observation (BRAT-DO) park assessment instrument and national crime data, we sought to determine if parks were linked to crime in the surrounding area, if the number of activities in the park correlated to the amount of crime in the area, if landscaping played a role in crime generation near parks, or if the income area where the park was located had a stronger correlation to the amount of crime committed in the area.

METHODS

This cross-sectional study used the BRAT-DO reference manual instrument to evaluate recreational parks across the United States of America to determine the following: (1) Are parks crime generators? (2) Does the condition of the park impact the crime rate? (3) Does the number of activity generators within the park impact the crime rate, i.e., do parks with more activity generators have less crime compared to parks with fewer activity generators? (4) Do areas where parks have fields and courts/sports options have less crime than areas where parks do not? (5) Does socioeconomic status have a stronger association with crime than parks? Convenience sampling was used for park selection. Data collection was conducted from October 2019 through March 2022.

The BRAT-DO instrument is widely used in research for measuring overall park conditions, as well as the visible condition of each of the following attributes: overall aesthetics, benches, bike racks, shelters, restrooms, concession stands, drinking fountains, picnic tables, water features, art, monuments, parking areas, green space, features, playgrounds, and sports fields. The BRAT-DO is a validated and accepted method for scoring and evaluating specific characteristics of parks. The BRAT-DO, a paper and pencil instrument, was first converted to the digital format using Qualtrics (Qualtrics^{XM}, UT, USA) for ease of completion. Data collectors were trained on the instrument's use before data collection.

Attributes from the BRAT-DO were based on the overall condition of the park, the number of activity generators, and the availability of sports options.

Condition of the Park

Per the BRAT-DO instrument, park conditions were evaluated using restroom amenities and condition, park signage and policies (such as reservation policies), landscaping attractiveness and condition, shade sources, sound sources, smells, presence of litter, risky litter and/or graffiti, presence and/or condition of benches, presence and/or condition of bike racks, types of shelter available, shelter condition, and the condition of any playground equipment.

Activity Generators

Park activity generators included water features (ponds, lakes, rivers, streams, fountains, waterfalls, boating, swimming, and fishing), playground equipment (swing set, slide, climbing apparatus, merry-go-round, see-saw, rocker, blacktop games, and others), sporting equipment (tennis, basketball, baseball, football, soccer, hiking, golf, and swimming), and other activities (zoo, botanical gardens, stables, and others).

Crime Statistics

Crime statistics were gathered from Crimegrade.org and were compiled based on the zip code of the park. Arrest rates were used to determine the crime level in each area. Crime was calculated as the rate per 1,000 people. Crimes were categorized as violent crime, property crime, or others. Violent crimes included assault, robbery, rape, and murder. Property crimes included theft, vehicle theft, burglary, and arson. Other crimes included kidnapping, drug-related crime, vandalism, identity theft, and animal cruelty.

Income Level

Median-income level as well as percentage of people in poverty were both based on the area code of the park and were determined by using the U.S. Census data.

Data were entered either directly into Qualtrics from the park or recorded on the paper version and entered later. Primary variables of interest included crime rate, BRAT-DO park attributes, and income level of the area.

Correlation analysis was conducted using SPSS (IBM, IL, USA) statistical software. In cases with missing data,

we used the case as long as we could identify the park and its location. For specific analysis with missing values we excluded the data. Correlation results were considered moderate at the 0.3–0.5 level and highly correlated at 0.6 and above.

Levene's test of homogeneity was used to test for equal variance. A Q–Q plot of residuals, along with the Shapiro–Wilk test of normality, was used to determine normal distribution. Results were considered significant at the $p < 0.05$ level with a 95% confidence interval.

RESULTS

Three hundred and fifty-one parks were evaluated across 45 states. The mean poverty level was 13.29%, with a standard deviation of 8. The mean income was $74,000, with a range of $25,421–$242,610.

There was a mean total violent crime rate of 21.8 violent crimes per 1,000 people. Rape had the highest mean rate of 13.23 per 1,000 people. Total property crime had a mean of 20.45 property crimes per 1,000 people, with theft (14.29) being the highest and burglary (3.94) being the next highest.

Total other crime had a mean of 23.56 per 1,000 people, with identity theft (26.75) as the highest and kidnapping (12.73) as the second highest, although there was significant variance in these results.

Park conditions used a Likert scale of 1–5, with 5 being the highest score, and included measures of landscaping attractiveness and condition (mean = 3.98), sounds (3.78), smells (3.94), condition of benches (3.92), condition of shelters (3.63), condition of the playground (3.84), and condition of equipment (1.97).

Measures of litter (1.62), risky litter (1.23), presence of broken playground equipment (1.41), and graffiti (1.16) were also measured on a Likert scale of 1–5, with 5 indicating high levels of the given attribute. It also included an assessment of restrooms, including measurements of toilet functionality (3.0), sink functionality (2.90), restroom cleanliness (2.51), and overall restroom condition (2.61). About half of the parks with restrooms reported not having soap (0.49), and just over half reported having working hand dryers (0.51). Park conditions did not correlate with violent crime, property crime, or other crimes.

Activity generators were evaluated based on being present or not. Activities included tennis (30%), basketball (42%), baseball (36%), football (13%), soccer (34%), hiking (43%), playground (80%), golf (8%), swimming (13%), zoo (0), botanical garden (6%), and stables (1%). Activity generators had no correlation with violent crime ($r = 0.24$), property crime ($r = -0.113$), or other crimes ($r = 0.088$).

Poverty level did not correlate with total violent crime ($r = -0.011$); there was no correlation with total property crime ($r = 0.131$) and no correlation with total other crimes ($r = 0.017$). Burglary had a moderate correlation to poverty level ($r = 0.417$).

Median income did not correlate with total violent crime ($r = -0.004$), no correlation with total property crime ($r = -0.101$), and no correlation with total other crimes ($r = 0.003$). When evaluating specific crime types, burglary had a weak to moderate negative correlation ($r = -0.381$) with median income.

DISCUSSION

Despite prior indications that parks are crime generators, our research did not support that theory. We did not find any correlation between parks and crime, irrespective of the landscaping and condition of the park, the activity generators in the park, or the income level where the park is located.

Factors such as park maintenance, lighting, and amenities did not exhibit any consistent pattern that could be linked to increased crime. This suggests that the mere presence of a park does not appear to be a crime generator. Additionally, the number of activities in the park did not negatively correlate with crime generation. This challenges the idea that an active park environment alone will deter or encourage crime.

Our most notable findings were a moderate correlation between burglary rates and poverty levels in the surrounding neighbourhoods. As poverty levels increased, burglary rates also tended to rise, while higher median incomes correlated with lower burglary rates. This observation supports Newton's (2018) theory that parks can attract opportunistic crime. Parks, by their nature, function as communal spaces that draw diverse groups of people, increasing foot traffic from both residents and visitors. While this promotes community engagement and well-being, it also creates opportunities for crimes like burglary. Importantly, our study did not find a similar relationship between poverty levels and violent crimes. Bjerk (2020), in writing about the relationship between the different motivations of thieves, thugs, and poverty levels, offers a possible explanation, suggesting that thieves, motivated by economic gain, may be more likely to commit property crimes like burglary, while thugs, who engage in violent acts, have different motivations.

The increased number of people in an area creates a more transient environment where individuals with malicious intent may exploit opportunities arising from increased vulnerabilities. Such situations, characterized by a blend of anonymity and the potential for unattended personal belongings, could result in an environment conducive to opportunistic crimes such as burglary. And this was more likely to be associated with the level of poverty in the surrounding area independent of the presence of the park.

These findings may indicate that increased safety and security measures in parks and their surrounding areas, particularly during and after times of high usage, and in low-income or high-poverty level areas, may be warranted. Public education on the risk associated with preventing opportunistic burglary may also be beneficial in areas with active parks. Urban planners should be mindful of associated risks surrounding parks and work to design parks that promote both community engagement and security for the park and the surrounding areas, particularly in low-income areas.

Because of the scope of our project, evaluating multiple states and communities, we used publicly available crime data based on zip code. Additional research that used geospatial mapping to determine the crime data in the immediate vicinity of the park may render different results. Additionally, future studies looking at parks and crime may benefit from correlating the time a crime occurs to known events happening within the park to determine if there is a time correlation between park activities and crime. Finally, focusing on specific crimes of interest may be beneficial for future research.

We also did not consider the population size of the area. The population size of the surrounding community may impact results. For example, parks within a large urban area may have higher crime rates than those in smaller rural settings. Analysis of population size was outside the scope of this project, but population-specific findings could indicate that parks within a specific population size perform differently in terms of crime than those in less populated areas and would warrant further study.

An additional limitation was that COVID-19 occurred during our study, which reduced the number of people using parks in some areas. It could also have skewed crime data as well as park conditions during that time.

Based on these findings, parks do not appear to be crime generators. However, this study represents preliminary findings and additional research which includes geospatial mapping and adjustments for population sizes is needed to qualify these conclusions.

CONFLICT OF INTEREST DISCLOSURES

The authors declare that there are no conflict of interest disclosures.

ETHICS STATEMENT

This study did not include human or animal subjects and therefore did not require IRB or IACUC review.

AUTHOR AFFILIATIONS

*School of Health Sciences, Purdue Global University, West Lafayette, IN, USA; †Hawkeye Community College, Waterloo, IA, USA; ‡School of Business and IT, Purdue Global University, West Lafayette, IN, USA.

REFERENCES

American Planning Association. (2023). *City parks forum*. Planning. https://www.planning.org/cityparks/

Becker, G. (1974). *Crime and punishment: An economic approach. In essays in the economics of crime and punishment* (1st ed., pp. 1–54). NBER. https://www.nber.org/books-and-chapters/essays-economics-crime-and-punishment/crime-and-punishment-economic-approach

Bjerk, D. (2020). *Thieves, thugs, and neighborhood poverty*. https://www.frbsf.org/wp-content/uploads/ThievesThugs_DavidBjerk.pdf

Brantingham, P., & Brantingham, P. (1995). Criminality of place: Crime generators and crime attractors. *European Journal on Criminal Policy and Research*, *3*(9), 5–26. https://doi.org/10.1007/BF02242925

Crompton, J. L., & Nicholls, S. (2020). Impact on property values of distance to parks and open spaces: An update of U.S. studies in the new millennium. *Journal of Leisure Research*, *51*(2), 127–146. https://doi.org/10.1080/00222216.2019.1637704

Groff, E., & McCord, E. S. (2012). The role of neighborhood parks as crime generators. *Security Journal*, *25*(1), 1–24. https://doi.org/10.1057/sj.2011.1

Jacobs, J. (1961). *The death and life of great American cities* (1st ed.). Random House. http://www.petkovstudio.com/bg/wp-content/uploads/2017/03/The-Death-and-Life-of-Great-American-Cities_Jane-Jacobs-Complete-book.pdf

Kelling, G. L., & Wilson, J. Q. (1982). Broken windows. *Atlantic Monthly*, *249*(3), 29–38.

Larson, L., & Ogletree, S. (2019). *Can parks help cities fight crime?* The Conversation. https://theconversation.com/can-parks-help-cities-fight-crime-118322

Lockwood, D. (2007). Mapping crime in Savannah: Social disadvantage, land use, and violent crimes reported to the police. *Social Science Computer Review*, *25*(2), 194–209. https://doi.org/10.1177/0894439307298935

Newton, A. (2018). Macro-level generators of crime, including parks, stadiums, and transit stations. In G. J. N. Bruinsma & S. D. Johnson (Eds.), *The Oxford Handbook of Environmental Criminology* (Vol. 1, pp. 497–517). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780190279707.013.16

Ogletree, S. S., Larson, L. R., Powell, R. B., White, D. L., & Brownlee, M. T. J. (2022). Urban greenspace linked to lower crime risk across 301 major U.S. cities. *Cities*, *131*(3), 1–12. https://doi.org/10.1016/j.cities.2022.103949

Perkins, D. D., Wandersman, A., Rich, R. C., & Taylor, R. B. (1993). The physical environment of street crime: Defensible space, territoriality and incivilities. *Journal of Environmental Psychology*, *13*(1), 29–49. https://doi.org/10.1016/S0272-4944(05)80213-0

Quednau, J. (2021). How are violent crime rates in U.S. cities affected by poverty? *The Park Place Economist*, *28*(1), 1–24. https://digitalcommons.iwu.edu/parkplace/vol28/iss1/8/

Shepley, M., Sachs, N., Sadatsafavi, H., Fournier, C., & Peditto, K. (2019). The impact of green space on violent crime in urban environments: An evidence synthesis. *International Journal of Environmental Research and Public Health*, *16*(24), 4–10. https://doi.org/10.3390/ijerph16245119

Troy, A., & Grove, J. M. (2008). Property values, parks, and crime: A hedonic analysis in Baltimore, MD. *Landscape and Urban Planning*, *87*(3), 233–245. https://doi.org/10.1016/j.landurbplan.2008.06.005

Voicu, I., & Been, V. (2008). The effect of community gardens on neighboring property values. *Real Estate Economics*, *36*(2), 241–283. https://doi.org/10.1111/j.1540-6229.2008.00213.x

Wilcox, P., Quisenberry, N., Cabrera, D. T., & Jones, S. (2004). Busy places and broken windows? Toward defining the role of physical structure and process in community crime Models. *The Sociological Quarterly*, *45*(2), 185–207. https://doi.org/10.1111/j.1533-8525.2004.tb00009.x

Wynveen, C. J., Bixler, R. D., & Hammitt, W. E. (2007). Urban encroachment brings deviant behavior to resource recreation areas. In R. Burns & K. Robinson (comps.), *Proceedings of the 2006 Northeastern Recreation Research Symposium*. https://www.nrs.fs.usda.gov/pubs/gtr/gtr_nrs-p-14/74-wynveen-p-14.pdf