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Methods and Findings from the National Violent Death Reporting System for Identifying Gang-Like Homicides, 2005–2008

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Abstract

Background—The National Violent Death Reporting System (NVDRS) captures homicides that law enforcement or coroner/medical examiners deem as gang-related but the criteria used may vary across locations. Also, the existing gang-related variable likely underestimates the number of homicides that are associated with gang activity. This study utilizes NVDRS data to identify "gang-like" homicides which are not currently captured as "gang-related."

Methods—A set of criteria recommended by a panel of experts in gang violence, was applied to homicides collected in the NVDRS. These criteria, termed "gang-like" characteristics, were developed in order to better identify homicides consistent with gang activity. The narratives of the identified cases were then reviewed to refine the operational standard. After the reviews were complete, the typology was modified to finalize the operationalization of "gang-like" homicides.

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Results—A total of 481 gang-like homicides were identified using the "gang-like" criteria. This represents an increase of almost 69% over the 696 gang-related homicides captured in NVDRS dataset. Gang-like and gang-related homicides combined represented 6.6% of homicides that occurred from 2005 to 2008. Among the 16 states included in this analysis, Colorado (15.5%) and Oklahoma (14%) had the highest percentage of homicides that were either gang-related or gang-like. Maryland had the greatest relative increase (227.3%) between gang related and gang-like homicides.

Conclusion—The new "gang-like" variable complements the existing "gang-related" variable by providing an automated, standardized way to identify homicides that have circumstances consistent with gang activity. This new variable might be useful to states and localities seeking an efficient way to monitor homicides potentially resulting from gang activity. Additional efforts are needed to standardize the reporting of homicides associated with gang activity.

Keywords

Homicide; Gang; National Violent Death Reporting System; Circumstances

BACKGROUND

There were an estimated 782,500 gang members belonging to 29,900 gangs across the United States in 2011. The number of gang members and gang-related homicides increased slightly in metropolitan areas over the last decade.[1] In 2011, nearly 1 in 3 law enforcement agencies participating in the National Youth Gang Survey reported that gangs were active in their jurisdiction.[1] Involvement in gang activity may predispose an individual to be involved in criminal behavior[2] which may ultimately lead to becoming a perpetrator and/or victim of homicide. Recent data from 2009 shows that almost eight out of ten cities with populations greater than 100,000 regularly report gang homicides.[3] However, this number is widely believed to be an underestimate. The violence that results from gang activity can prevent individuals from living life to their full potential and have significant negative impacts on health.[4] Having the ability to identify homicides associated with gangs is critical for informing gang violence prevention strategies.

There are several impediments to the collection of accurate gang-related data. One is the lack of a national uniform definition of a "gang" used by all federal, state, and local law enforcement agencies. Another barrier involves attributing homicides directly to gang activity. Although efforts have been made to accomplish this, there are limitations in existing methodologies. Rogers,[5] Pizarro and McGloin[6] and Bailey[7] have published work attempting to distinguish gang homicides from non-gang homicides. Their approach primarily involves reviewing law enforcement records to identify gang homicide cases. However, the varying definitions and criteria used by different law enforcement agencies to identify gang homicides could result in unreliable state and national estimates of gang related homicides. A homicide labeled as gang related in one jurisdiction might not be labeled gang related in another jurisdiction. In addition, there are significant variations in experience with gang-related crime between jurisdictions which can impact estimates. Law enforcement records may be more reliable for identifying gang homicides in large cities such as Los Angeles and Chicago because of their size and development of gang intelligence units. However, in small

cities and localities with limited resources and no specialized gang intelligence unit, gang related homicides may not be easily distinguished by law enforcement.

Nonetheless there are definitions currently used by some law enforcement agencies to identify homicides resulting from gangs. One commonly used definition developed by the National Alliance of Gang Investigators' Associations (NAGIA) is: A gang is a group or association of three or more persons with a common identifying sign, symbol, or name who individually or collectively engage in criminal activity that creates an atmosphere of fear and intimidation.[8] Maxson and Klein refer to the term "Chicago" definition used by Chicago law enforcement agencies to classify a homicide as gang related only if it occurs between two or more gangs.[9] The definition used by law enforcement agencies in Los Angeles is more inclusive and identifies any homicide involving a gang member as being gang related.[9–11] If a law enforcement jurisdiction utilizes the "Chicago" definition for gang related homicides, potential gang related homicides could be missed. An example would be a gang member killing a non-gang member drug dealer for selling on the gang's turf. In this case, the death would not be considered a gang related homicide because the drug dealer was not affiliated with a gang. Thus, the number of homicides related to gang activity may be under reported based on the definition used. Homicides where law enforcement does not know if the suspect is a gang member and the victim is not a known gang member would not be captured using either definition. Many incidents with potential gang involvement are likely missed even though the circumstances indicate there is a high likelihood that it resulted from gang activity. Certain circumstances about a death might indicate a higher likelihood that the homicide was gang related. For example, a drive-by shooting is a circumstance that is a common characteristic of gang related homicides.[10] A homicide could result from a drive-by shooting, but the identity of the perpetrator is not known. Using either the "Chicago" or "Los Angeles" definition, that homicide would most likely not be classified as gang related.

Maxson and colleagues[10] have stated that rather than debate a best definition for use by law enforcement to determine a gang related homicide based on "gang motive" or "gang participation", a definition utilizing homicide circumstances may be worth considering. The definition would include circumstances most commonly associated with a gang homicide that would lead to its classification as a "gang-like" homicide. Decker and Curry[12] outlined eight specific characteristics of gang homicides that serve as a starting point for the development of a "gang-like" definition. These characteristics include: (1) spatial concentration; (2) weapon use; (3) race of victim and perpetrator; (4) location; (5) drug involvement; (6) age; (7) sex; and (8) victim–offender relationship. In this study, the authors apply the work of Decker and Curry combined with the input from two leading experts in the field (Arlen Egley and Kim Dammers) to develop an operational definition that could be applied to the National Violent Death Reporting System (NVDRS) data to tabulate homicides that appear to be associated with gang activity.

The National Violent Death Reporting System

The Centers for Disease Control and Prevention (CDC) began collecting violent death data through the NVDRS in 2003. NVDRS is a state-based surveillance system that provides detailed information about the circumstances of violent deaths at the national, state, and

local levels that is more detailed and timely than is currently available.[13] Eighteen states are currently funded to collect NVDRS data and include Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, Michigan, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia and Wisconsin. However, Ohio and Michigan did not begin data collection until 2010 and are therefore excluded from this analysis. NVDRS links data from vital records, medical examiners/coroners, law enforcement and crime laboratories to provide a greater understanding of the incident characteristics and precipitating circumstances surrounding each death. Narratives from law enforcement and coroner/medical examiner (C/ME) records describing the violent death are included in the database. The use of a database such as the NVDRS, which collects data from multiple data sources could potentially provide more reliable information for determining gang like homicides.[14]

NVDRS is in a unique position to increase the level of information public health and law enforcement agencies have to monitor homicides with known gang involvement and to identify those that may suggest gang involvement. Analysis of data captured in NVDRS indicates that the occurrence of homicides related to gang activity may be under reported. NVDRS captures homicides known to be “gang-related.” This variable is endorsed in the database only if the C/ME or law enforcement (LE) report states the death was gang-related. The NVDRS coding manual directs abstractors to endorse “gang-related” if one of the data sources reference that the homicide was related to gang activity. The authors theorized that many homicides are not identified by C/ME or LE as being gang related even when many of the circumstances that may point to the homicide being gang related are present. The development of a “gang-like” variable could allow for the estimation of the extent to which homicides associated with gang activity are under reported. This study sought to develop a set of circumstances surrounding a homicide that could suggest a death was related to gang activity.

METHODOLOGY

Initial work to identify gang-like cases was undertaken by the New Jersey Violent Death Reporting System which later became the catalyst and model for the development of a “gang-like” variable.[15] The category of gang-like homicide was created in New Jersey to describe homicides which are objectively similar to gang-related homicides (which here includes both the “motive” and the “member” categories) but which are not classified as such. Motive includes only events that occur as a result of gang business, i.e. killing of rival gang member, killing someone as part of a gang initiation. Member is more inclusive and includes any event where either the suspect or victim is a gang member.[9] The operationalization of gang-like homicide is based on objective scene, weapon characteristics, homicide circumstances, and the suspect–victim relationship (excluding intimate partner relationship).

In an effort to develop and test a variable that captures gang-like cases for all NVDRS states, a panel of gang experts and representatives from each NVDRS state was convened to provide guidance for the development of a “gang-like” homicide variable that builds on what was done in New Jersey. The panel suggested a set of circumstances that past research and

experience suggest are indicative of a gang-like homicide. The authors used these suggestions as guidance for developing a gang-like variable. The characteristics proposed for the coding the gang-like variable included: 1) cases where the weapon used was a gun, knife, or blunt object; 2) cases where the victim to suspect relationship was either a stranger, acquaintance, rival gang member, other person known to victim or person unknown/missing person (relationships such as friend, roommate, spouse, other intimate partner, and co-worker are excluded); 3) LE or CME circumstances where the incident was either related to a drive-by shooting, indicated the victim was a bystander, or involved in a brawl; 4) SHR circumstances included gangland killings or juvenile gang killings or drug related and cases where the location of injury was either a porch, street or driveway. Of these 4 characteristics, 3 needed to be present for the homicide to be classified as gang-like. Fig. 1 illustrates how the criteria for the gang-like variable overlap.

The operationalization of gang-like homicide variable developed using input from the panel was applied to the NVDRS dataset. Homicides checked as gang related in the database were excluded. However, the gang-like criteria were applied to the gang-related homicides to determine how many of those homicides would be flagged. The authors initially applied the criteria to the 2007 data to create a pilot dataset for manual review to determine validity and multi-rater reliability. Among the 4492 homicides that were not coded as gang-related, 365 cases were initially identified as gang-like. The narratives of the homicides meeting the criteria for gang-like were reviewed to determine if the deaths were consistent with the homicide being associated with gang activity. Each narrative was reviewed by two reviewers. Both reviewers had to concur a case should not be viewed as gang-like for the case to be excluded. The vast majority of cases that were excluded were those where the victim was an intimate partner or friend of at least one of the suspects, and the homicide resulted from a drug deal or during drug use. The manual review of narratives resulted in 152 cases (42%) being excluded and 212 cases (52%) selected. The narratives and circumstances of the 152 excluded cases were then reviewed to identify similar characteristics. The review determined that many of these cases involved drugs but did not have any other features of gang activity. Therefore it was decided to remove drug related from the set of circumstances used to identify gang-like cases. Excluding drug related from the classification resulted in 130 gang-like cases being identified out of the original 365 cases using just the circumstance information without review of narratives. The new classification criteria (Table 1) were applied to four data years (2005–2008).

RESULTS

There were a total of 696 cases identified as gang related in NVDRS by law enforcement or coroner/medical examiner from 2005 to 2008. An additional 481 cases were identified as gang-like cases. Gang related and gang-like cases represented 6.6% of the total homicides that occurred from 2005 to 2008 in NVDRS funded states. The proportion of gang-like homicide incidents varied across NVDRS funded states. States with the largest proportion of homicides identified as being attributed to gang-related or gang-like activity include Colorado (15.5%), Oklahoma (14.0%), New Jersey (13.7%), Utah (11.5%) and Massachusetts (10.6%). States with the smallest percentage of homicides attributed to gang-

related or gang-like activity include Kentucky (1.6%), South Carolina (2.8%), Georgia (3.0%) and Maryland (3.5%) (Table 2).

For Hispanics, Asian/Pacific Islanders and black, non-Hispanic homicide victims, the number of gang related cases surpassed the number of gang-like cases. The number of gang-like cases exceeded the number of gang related cases for White, non-Hispanic, American Indian/Alaska Natives and unknown or other. The greatest discrepancy was seen for American Indian/Alaska Natives and White, non-Hispanics where adding the gang-like cases resulted in relative increases of 162.5% and 158.3%, respectively (Table 3).

The age groups of victims of gang-related homicides ranged from 5 to 60+ years of age. Gang-like homicide victims ranged from less than 1 year of age to 60+ years of age. For both gang-related and gang-like cases, the majority of victims were between the ages of 15 and 29 (83% and 63.8% respectively) (Table 3). The majority of gang-related and “gang-like” homicide victims were males (93% and 85%).

Of the 188 homicides identified as gang related by law enforcement and or CME in the 2007 database, 70 met the criteria for gang-like. However, most of those homicides identified as gang related lacked details in the narrative. The few characteristics surrounding the homicide that were listed were enough for law enforcement to classify it as gang-related; however, the lack of detail resulted in the exclusion of cases that may have met the criteria for gang-like had the circumstances been documented.

Limitations

The findings provided in this report are subject to at least five limitations. First, we were unable to view original documents or the incident scene to make an assessment of the death so we could not independently verify the circumstances. Second, the gang homicide case definition can vary by law enforcement agency, which can result in substantial variation across states that might explain some of the variation in percent increases from adding gang-like to gang-related. Third, abstractors are limited to the data included in the reports they receive. Reports might not fully reflect all information known about an incident, particularly in the case of homicides, when data are less readily available until after prosecutions are complete. Fourth, NVDRS data are available only from a limited number of states and therefore are not nationally representative. Fifth, even with the addition of the gang-like variable we are probably still underestimating the prevalence of homicides that are associated with gang activity and further refinements in the coding are needed to improve the sensitivity.

CONCLUSION

Deaths due to gang activity are a significant problem in the U.S. where prevalence varies across jurisdictions. However these deaths are most likely undercounted and the true magnitude of these events are not currently being accurately captured. The purpose of this descriptive analysis is to develop and apply classification criteria to allow for the automated identification of homicide cases that have a high probability of gang involvement and could potentially provide more reliable estimates of deaths associated with gang activity. Since the

number of “gang-like” cases could potentially become too great for a manual review of each narrative as the number of data years increase, the ability to identify “gang-like” cases through an automated process may be beneficial for national, state and local assessments and monitoring. As the NVDRS database grows with additional years of data and the potential increase in the number of states participating in the system, automation of the process to identify “gang-like” homicides is crucial. While NVDRS is a valuable surveillance tool that uses multiple data sources to monitor the incidence and circumstances of violent deaths, the current results suggest that cases identified as gang related may be an underrepresentation of all deaths that are associated with gang activity. Using the “gang-like” variable we identified a significant number of homicides with characteristics like those most commonly associated with gang involvement that were not coded as “gang-related”. These results suggest the possibility that this variable can be a valuable benchmark for states and localities interested in having an efficient way to monitor homicides potentially resulting from gang activity that might otherwise be missed. These results may also suggest the “gang-like” variable may still be underestimating the number of homicides potentially associated with gang activities based on only 37% of gang-related homicides matching the “gang-like” criteria. Better data can translate into identifying potential areas and populations for prevention strategies as well as a tool for evaluating prevention programs.

Gang violence and gang homicides affect many communities across the United States. However, there are intervention programs that have shown effectiveness in addressing gang problems.[16,17] Since there is no single cause for youth gang membership or delinquency, isolated efforts focusing on a single risk factor are unlikely to have much success.[16,17] However, there is a sound theoretical basis and growing evidence to support the belief that comprehensive approaches to youth gangs that involve multiagency partnerships and a combination of prevention and intervention efforts can work.[17] The comprehensive approaches involve addressing risk factors at multiple levels such as individual characteristics, family conditions, school performance, peer group influences, and the community context.[18–20]

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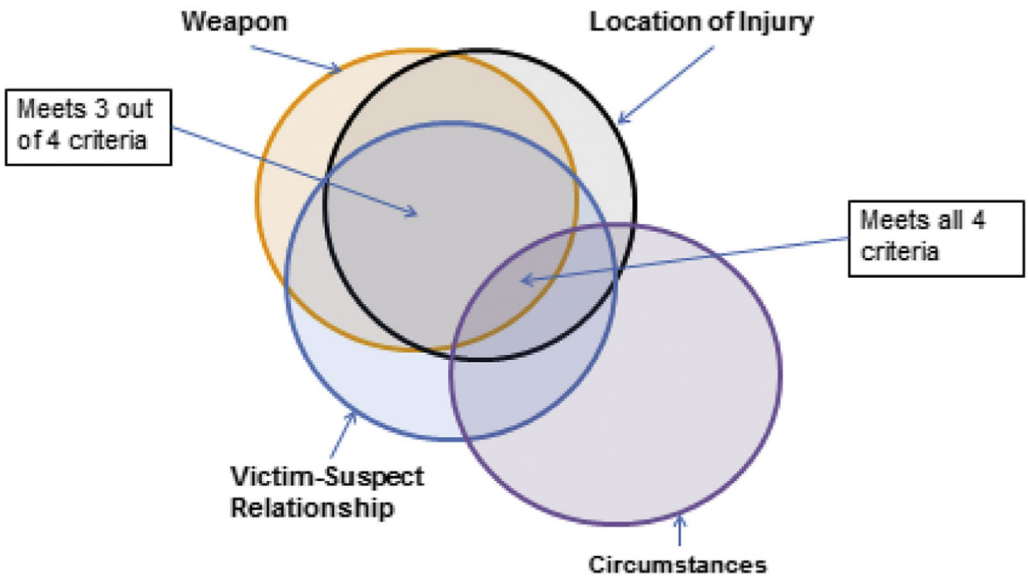

Figure 1.
Criteria for gang-like homicides. Note: the overlaps are a hypothetical depiction.

Table 1

Criteria used in the classification of Gang-Like homicides.

1. Weapon (gun, knife or blunt object) and;
2. V–S Relationship (stranger, acquaintance, rival gang member, other person known to victim or person missing) and;
3. Circumstances CME/PR Circumstances: (drive-by, bystander, or brawl) and or; SHR Circumstances: (brawl due to influence of alcohol or narcotics, gangland killings and juvenile gang killings) and;
4. Location of Injury (porch, street or driveway)

Table 2

Estimated percent homicides due to gang activity by state, 16 U.S. States, 2005–2008.

State	Gang-related and gang-like cases	Total homicide cases	Estimated percent homicides due to gang activity
Alaska	7	159	4.4
Colorado	115	743	15.5
Georgia	86	2856	3.0
Kentucky	13	811	1.6
Maryland	72	2077	3.5
Massachusetts	77	727	10.6
New Jersey	231	1687	13.7
New Mexico	52	595	8.7
North Carolina	163	2632	6.2
Oklahoma	129	924	14.0
Oregon	27	441	6.1
Rhode Island	9	132	6.8
South Carolina	41	1478	2.8
Utah	26	227	11.5
Virginia	77	1645	4.7
Wisconsin	52	767	6.8
Total	1177	17,901	6.6

Table 3

Counts of gang-related and gang-like homicides by sex, race/ethnicity and age group of victim, 16 U.S. States, 2005–2008.

Characteristic	Gang-related cases	Gang-like cases	Total	Percent increase
Gender				
Male	647	409	1056	63.21
Female	49	72	121	146.94
Total	696	481	1177	69.11
Race/ethnicity				
White – non-Hispanic	48	76	124	158.33
Black – non-Hispanic	424	317	741	74.76
AI/AN – non-Hispanic	8	13	21	162.50
Asian/PI – non-Hispanic	20	9	29	45.00
Hispanic	193	63	256	32.64
Unknown/other	3	3	6	100.00
Age group				
<1 year	0	1	1	#
1–4 years	0	6	6	#
5–9 years	3	2	5	66.67
10–14 years	20	14	34	70.00
15–19 years	244	91	335	37.30
20–24 years	208	124	332	59.62
25–29 years	126	92	218	73.02
30–34 years	47	43	90	91.49
35–39 years	16	39	55	243.75
40–44 years	16	24	40	150.00
45–49 years	9	23	32	255.56
50–54 years	4	9	13	225.00
55–59 years	0	6	6	#
60+ years	3	7	10	233.33

Note: “Gang-Related” cases are those reported in the NVDRS database. “Gang-like” are cases detected applying a classification based on known characteristics of cases not identified as gang-related. They are mutually exclusive.

Percent increase is undefined since there were 0 gang-related cases.