HOMICIDE RESEARCH WORKING GROUP

2015 ANNUAL MEETING

FUTURE DIRECTIONS: STATUS OF HOMICIDE RESEARCH IN THE 21st CENTURY

Clearwater Beach, FL
June 10-13, 2015

Program Chairs: Candice Batton and Wendy Regoeczi

Local Arrangements: Dwayne Smith, Kathleen Heide, and John Cochran

Future Directions: Status of Homicide Research in the 21st Century:

Proceedings of the 2015 Meeting Of the Homicide Research Working Group

Clearwater Beach, Florida

Edited by:
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Homicide Research Working Group Goals

The Homicide Research Working Group (HRWG) is an international and interdisciplinary organization of volunteers dedicated to cooperation among researchers and practitioners who are trying to understand and limit lethal violence.

The HRWG has the following goals:

- to forge links between research, epidemiology and practical programs to reduce levels of mortality from violence;
- to promote improved data quality and the linking of diverse homicide data sources;
- to foster collaborative, interdisciplinary research on lethal and non-lethal violence;
- to encourage more efficient sharing of techniques for measuring and analyzing homicide;
- to create and maintain a communication network among those collecting, Maintaining and analyzing homicide data sets; and
- to generate a stronger working relationship among homicide researchers

Homicide Research Working Group publications include the Proceedings of each annual Intensive Workshop (beginning in 1991) and the journal, *Homicide Studies,* (beginning in 1997).

More information is available on the HRWG web site at
http://www.homicideresearchworkinggroup.org

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The views expressed in the ***Proceedings*** are those of the authors and speakers, and not necessarily those of the Homicide Research Working Group or the co-editors of this volume.

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OPENING PRESENTATION

Homegrown Violent Extremists: A Discussion of the Growing Threat

SSAs, Keith Ludwick & Thomas Baugher

Federal Bureau of Investigation Supervisory Special Agents (SSA) Keith Ludwick and Thomas Baugher discussed what is referred to as "Homegrown Violent Extremism" (HVE). HVE's are generally defined as individuals of any citizenship who have lived in the United States and who desire to engage in a terrorist activity, including mass murder, to advance an ideological, religious, or social goal. The focus of the discussion is on persons who are influenced by foreign terrorist organizations, but typically act alone without any specific guidance from an external terrorist organization. HVE's are a diverse group of individuals, who can include U.S.-born citizens, naturalized citizens, green card holders or other long-term residents, foreign students, or illegal immigrants. HVE's are similar in that they have become radicalized while living in Western nations, leading them to reject Western cultural values, beliefs, and norms. SSA's Ludwick and Baugher offered their practitioners' view of this threat while discussing cases of those who have engaged in a terrorist attack as well as those who have aspired to commit a terrorist attack, but who were preempted by law enforcement.

SSA Keith W. Ludwick currently leads Squad 18 – Technical Services, within the Tampa Division of the Federal Bureau of Investigation. Squad 18, comprised of six Technically Trained Agents, five Computer Forensic Examiners, six electronic Technicians, one Telecommunications Specialist, and one Administrative Support, provides operational and technical support for the entire Tampa Division. Prior to this role, SSA Ludwick served as the Unit Chief of the Sensitive Operations Support Unit within the Tactical Operations Section at Quantico, VA. Before leading the SOSU, he served as a covert operator for the Tactical Operations Section, participating in over a hundred covert operations and developing numerous covert platforms supporting these operations. SSA Ludwick obtained a BS in Computer Science from California State University-Sacramento, a MA in Strategic Studies/Homeland Security from the Naval Postgraduate School, and is currently pursuing a Ph.D. in Biodefense from George Mason University. His research interests include lone wolf terrorism, terrorism organizational structure, and the social identity of terrorists. Before his appointment as a Special agent with the FBI, SSA Ludwick served as an officer and C-141 Pilot in the U.S. Air Force with over 2,000 flight hours including several missions supporting Operation Desert Storm.

SSA Tom Baugher graduated with honors from Johns Hopkins University where he was Captain of the football team and in ROTC. Upon graduation, he received his commission as an officer in the Army Reserve and attended the University of Pennsylvania Law School where he concentrated on criminal and national security law. He has been admitted to practice law in Florida, Pennsylvania, and New Jersey. SSA Baugher also has his MBA from the University of Massachusetts–Amherst, is a Certified Fraud Examiner, EMT, and has worked at the U.S. Attorney's Office in Philadelphia and for a private law firm. He has published in the *International Journal of Intelligence and Counterintelligence*, *Fraud Magazine*, and the *Journal of Arson Investigation*. SSA Baugher joined the FBI in 1997 and has been assigned to Newark, NJ, San Juan, PR, and Headquarters. He is currently a Supervisor in the Tampa Division and the SWAT Senior Team Leader.

KEYNOTE SPEAKER

Dr. Erin Kimmerle, Associate Professor

Florida's Dozier School for Boys: A Murder Mystery?

In 2011, the Arthur G. Dozier School for Boys (a.k.a. Florida School for Boys) located in Marianna, Florida was closed after more than a 100-year history of controversy regarding abuse, malfeasance, and allegations of murder. The Florida State Reform School first opened in 1900 and was located on 1400 acres of land. Children were committed to the school for minor offenses such as "incorrigibility" or "truancy" or for serious crimes such as theft and murder. Originally the school housed children as young as six years old, including both males and females. Beginning in 1901, reports surfaced of children being chained to walls in irons, brutally whipped, and being hired out for labor. During the first thirteen years of operation, there were more than six state led investigations. Allegations of beatings, rapes, and whippings by more than 300 men, called the "White House Boys," lead to a more recent investigation in 2008-09 by the Florida Department of Law Enforcement (FDLE), which reported that 81 deaths had occurred at Dozier, 31 of whom were buried on the school grounds. Families of boys who died at the school began to speak publicly about their lifelong searches for answers about the deaths and the grave locations of their brothers and uncles. In response, Dr. Kimmerle organized a team to locate the graves and determine the number, identity and circumstances of deaths. Through archaeological fieldwork, archival research, ethnographic interviews, and forensic analysis, 55 burials were located and to date five bodies have been identified. The first identification was George Owen Smith, who had been missing 73 years. His remains were returned to his sister who had visited the school in 1941 with their parents to investigate Owen's suspicious death. This presentation detailed the multiple methods used for investigation and the qualitative results. The majority of deaths were not documented; in many cases, the deaths were not reported to the State nor were there death investigations completed by persons outside of the school's administration. In the context of the reform school, long-term missing person and homicide cases are discussed. How do victims obtain justice decades later? What mechanisms are in place for victims and their families when criminal prosecution is not an option due to the statute of limitations or a lack of physical evidence? The historical significance of human and civil rights violations in Florida in the area of juvenile justice and the rights of families to have accountability and transparency were discussed.

Erin H. Kimmerle, Ph.D. is an Associate Professor of Anthropology at the University of South Florida. She received her degrees in Anthropology from the University of Tennessee (Ph.D.), the University of Nebraska (M.A.), and Hamline University (B.A.). Before coming to the USF she worked as an osteologist at the National Museum of Natural History, Smithsonian Institution, in Washington, D.C., and served as Chief Forensic Anthropologist for the United Nations, International Criminal Tribunal for the Former Yugoslavia (2001). She has worked on numerous missions in Nigeria, Peru, Kosova, Bosnia and Herzegovina, Croatia, and Bermuda since 2000. Dr. Kimmerle's research is in the areas of international human rights and forensic anthropology. Currently, she oversees a number of large statewide projects including the Tampa Bay Cold Case Project and the Investigations into Deaths and Burials at the former Arthur G. Dozier School for Boys in Marianna, Florida. She has edited two special volumes for scientific journals; is the co-author of the book, *Skeletal Trauma: Identification of Injuries in Human Rights Abuse and Armed Conflict*.

Program Overview

Wednesday June 10, 2015

5:00 - 9:00 p.m. Opening Reception – Poolside Patio
Co-Sponsored by: The University of South Florida's Department of Criminology
Open bar and Hors d'oeurves begin at 5:00 p.m.

**** We would like to extend our thanks to Dr. Michael Leiber and the Department of Criminology at the University of South Florida for their generous donation toward the opening reception ****

7:00 - 8:00 p.m. Opening Presentation – Bay Room
Federal Bureau of Investigation
Supervisory Special Agents Keith Ludwick and Thomas Baugher
Homegrown Violent Extremists: A Discussion of the Growing Threat

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Thursday June 11, 2015

7:45 - 8:15 a.m. Breakfast - Rusty's Bistro

8:15 - 8:30 a.m. Introductions – Palm Bay Room

8:30 a.m. *Posters*

Online Marketing of Trauma Scene Cleaning Services to Private Residences
Chelsea J. Nordham, University of Central Florida
Adam J. Pritchard, University of Central Florida

8:30 - 10:30 a.m. *Panel Session 1* Chair: Kim Vogt
Recorder: Amber Scherer
Trends and Historical Perspectives in Homicide

Trends in NIBRS Drug Arrest Rates and Homicide Victimization, 1995 to 2012
Roland Chilton, University of Massachusetts Amherst

The Fates of Defendants Convicted in Capital Punishment Trials: A Long-term Analysis
M. Dwayne Smith, University of South Florida

The Relationship between the Kendall Murders and the Plot of the Chinese Parrot
Vance McLaughlin, homicideresearch.com

The Execution of Pirates in America
Paul Blackman, Independence Institute
Vance McLaughlin, homicideresearch.com

10:30 - 10:45 a.m. Break

10:45 a.m. - 12:15 p.m. *Panel Session 2* Chair: Claire Ferguson
Recorder: Michael Becker

Serial and Mass Murder

Addressing the Challenges and Limitations of Utilizing Data to Measure Serial Homicide
Enzo Yaksic, Serial Homicide Expertise and Information Sharing Collaborative
Michael Aamodt, Radford University

Neurodevelopmental and Psychosocial Risk Factors in Serial Killers and Mass Murderers
Clare S. Allely, University of Salford
Helen Minnis, University of Glasgow
Lucy Thompson, University of Aberdeen
Philip Wilson, University of Gothenberg
Christopher Gillberg
Mike Aamodt, Radford University
Enzo Yaksic, Serial Homicide Expertise and Information Sharing

Mass Murder: Is There a Relationship between Weapons and Fatalities?
Sarah Ann Sacra, University of Central Florida
James McCutcheon, University of Memphis
Lin Huff-Corzine, University of Central Florida
Mindy Weller, University of Central Florida
Jay Corzine, University of Central Florida
Aaron Poole, University of Central Florida

12:15 - 1:15 p.m. Lunch – Rusty's Bistro

1:15 - 2:15 p.m. Business Meeting 1

2:15 - 2:30 p.m. Break

2:30 - 4:30 p.m. Keynote Speaker: Erin Kimmerle
Florida's Dozier School for Boys: A Murder Mystery?

4:30 – 6:00 p.m. Reception
Location: Hospitality Suite

Friday June 12, 2015

8:30 - 9:00 a.m. Breakfast - Rusty's Bistro

9:00 - 11:00 a.m. *Panel Session 3* – Palm Bay Room Chair: Chris Rasche
Recorder: Trisha Whitmire

Homicide Investigation and Prosecution

Exploring Recent Trends in Police Responses to Homicide, Violence, and Property Crimes
Tim Keel, Federal Bureau of Investigation
John Jarvis, Federal Bureau of Investigation

An Examination of Investigative Practices of Homicide Units in Florida
Richard Hough, University of West Florida
Kim Tatum, University of West Florida
Jonathan Alcover, University of West Florida

Guilt, Evidence, and Probability
Tom McEwen, McEwen & Associates
Wendy Regoeczi, Cleveland State University

Homicide Investigation Research: A Transatlantic Perspective
Pawel Waszkiewicz, University of Warsaw/Rutgers University

11:00 - 11:15 a.m. Break

11:15 a.m. - 12:15 p.m. Business Meeting 2

12:15 - 1:15 p.m. Lunch - Rusty's Bistro

1:15 - 3:15 p.m. *Panel Session 4* Chair: Lin Huff-Corzine
Recorder: Mindy Weller

Subtypes of Homicides

A Preliminary Analysis of Correlates of Child Homicide Victimization Using the National Violent Death Reporting System, 2005-2012
Kim Vogt, University of Wisconsin-La Crosse

Vehicular Homicide in the United States
Christopher Schubert Dunn, Bowling Green University

Trends and Characteristics of Occupational Suicide and Homicide in Farmers and Agricultural Workers, 1992 to 2010
Wendy Ringgenberg, University of Iowa

Not in our community: An exploratory analysis of intimate partner homicide in rural versus urban communities
Hollianne Marshall, California State University Fresno
Jordana Navarro, Tennessee Technological University

3:15 - 3:30 p.m. Break

3:30 - 5:00 p.m. *Panel 5* Chair: Dallas Drake
Recorder: Michelle Craske

The Aftermath of Homicide: Responses and Prevention

Homicide Survivors: A Literature Review
Kim Davies, Georgia Regents University

Family and Other Survivors of Line of Duty Deaths of Law Enforcement Officers
Greg S. Weaver, Auburn University
Lin Huff-Corzine, University of Central Florida
Melissa Tetzlaff-Bemiller, University of Memphis
J. Amber Scherer, George Mason University
Zachary Johnson, Auburn University

Can Comprehensive Domestic Violence Strangulation Prevention and Response Efforts Prevent Homicide?
Adam Pritchard, University of Central Florida

Saturday June 13, 2015

8:00 - 8:30 a.m. Breakfast – Rusty's Bistro

8:30 - 10:00 a.m. *Panel Session 6* – Palm Bay Room Chair: Kim Davies
Recorder: Lauren Wright

Analyzing Homicide Crime Scenes and Behaviors

Exploration of Crime-Scene Actions in Juvenile Homicide in the French-Speaking Part of Belgium
F. Jeane Gerard, Coventry University
Kate Whitfield, Birmingham City University
Kevin Browne, University of Nottingham

The Role of Conflict and Planning in Crime Scene Staging: An Analysis of Solved Homicide Cases
Claire Ferguson, Queensland University of Technology
Laura Pettler, Carolina Forensics

Motor Vehicle Theft Following Homicide: Analysis of Motivational Undercurrents
Michael Becker, Center for Homicide Research
Dallas Drake, Center for Homicide Research
Yeli Zhou, Center for Homicide Research
Inna Telkova, Center for Homicide Research

10:00 - 10:15 a.m. Break

10:15 - 11:45 a.m. *Panel Session 7* Chair: Jeff Osborne
Recorder: Jolene Vincent

Theoretical and Measurement Issues in Studying Homicide

Overkill, We Know it When We See it: Quantifying Excessive Injury in Homicide
Kimberley Schanz, John Jay College of Criminal Justice
Carrie Trojan, Western Kentucky University
C. Gabrielle Salfati, John Jay College of Criminal Justice

Appetitive Violence: Secrets in the Production and Evolution of Homicidal Predation
Dallas Drake, Center for Homicide Research

Mass Violence: A Mixed Methods Approach to the Study of Mass Victimization Incidents
Mindy Weller, University of Central Florida

11:45 - Noon Concluding Announcements

Panel Session 1: Trends and Historical Perspectives in Homicide

Chair: Kim Vogt – Recorder: Amber Scherer

Trends in NIBRS Homicide and Drug Arrest Rates 1991-2010: Large and Small City Patterns

Roland Chilton and Wenona Rymond-Richmond
University of Massachusetts Amherst

Abstract

When data from the FBI's National Incident-Based Reporting System (NIBRS) are used to compare trends in drug crime with those for murder, the results indicate that drug crime was reported at rates that were about 100 times higher than murder rates, that the increase in drug crime rates after 1991 was much greater than increases in murder rates, that drug crime arrest rates were much higher for 15-29 year old black men than they were for other race-sex-age categories, and that small cities had as much impact on the increase in drug offenses as large cities. The results provide additional support for the suggestion that drug enforcement practices that target young black men were a major factor in the growth of prison and especially jail incarceration in the United States.

Background and Perspective

The prison population in the United States quintupled over the last 30 years. It grew from approximately 200,000 in 1973 to 1.5 million is 2009. This gives the United States the highest incarceration rate and the largest number of criminals behind bars in the world. One startling aspect of this growth in incarceration is that sixty percent of those incarcerated are Black or Hispanic. The United States uniquely imprisons more of its racial and ethnic minorities than any other country in the world (Alexander 2012:20). Alexander (2012), and a 2014 National Research Council Report argue that drug convictions were a major factor in the incarceration rate increase. The NIBRS data provides additional evidence that drug offenses were primarily responsible for the increase in prison and jail incarceration rates. Like Alexander and the NRC, this study indicates the disproportionate impact of drug charges on Black men. In addition, analysis of the NIBRS data indicates that small cities had as much impact on the increase in drug offenses as large cities.

Using National Incident-Based Reporting System (NIBRS) data to examine trends in arrests, and the characteristics of those arrested, is complicated by the continuous growth in the number of police agencies participating in NIBRS. Since some of the additional agencies are in cities with populations of more than 100,000 residents and others are in very small cities and towns, it is important to know if the trends revealed by an examination of NIBRS data for the last fifteen or twenty years is skewed by the addition of several large police agencies or by the addition of thousands of small agencies.

Using National Incident-Based Reporting System (NIBRS) data to examine trends in arrests, and the characteristics of those arrested, is complicated by the continuous growth in the number of police agencies participating in NIBRS. Since some of the additional agencies are in cities with populations of more than 100,000 residents and others are in very small cities and towns, it is important to know if the trends revealed by an examination of NIBRS data for the last fifteen or twenty years is skewed by the addition of several large police agencies or by the addition of thousands of small agencies.

In the past, this concern led one of us to select sets of cities that have provided NIBRS data for every year of a ten-year period (Chilton and Regoeczi, HRWG 2007). This approach was probably over-cautious, and it failed to take advantage of the vast amount of NIBRS data available for analysis. The analyses reported here is part of a larger project to reexamine the role of drug arrests as a major contributor to the disproportionate incarceration of black men and the closely related growth of incarceration in the United States (NRC, 2014). But to move in this direction, assessing the impact of the changing composition of cities participating in NIBRS is important. One way to do this is by totaling drug crime and murder counts for a set of cities with populations over 100,000 for each year and comparing the trends with the total annual drug crime and murder counts for a set cites with fewer than 100,000 residents.

The changing composition of police agencies participating in NIBRS can be seen in Table 1. The table contains the total number of incidents reported by participating agencies from 1991 to 2010 and the number of police agencies and the populations they represent for the years 1991, 1993, 1999, and 2010. In addition, Table 1 contains information about murder and drug incidents reported each year, and about the percent increase in agencies, populations, and incidents.

Table 1. Agencies, Incidents, and Population Reported for Selected Years in the National Incident-Based Reporting System, 1991-2010.

	1991	**1993**	**1999**	**2010**	**PC Increase**
Agencies	364	864	1,603	3,250	793 %
Incidents	617,000	933,000	2,311,000	5,540,000	798 %
Population	3.6 Million	8.4 Million	18.4 Million	43.7 Million	1,114 %
Murder Incidents	504	363	620	2,403	377 %
Drug Incidents	10,418	20,510	107,835	361,245	3,368 %
PC Murder Incidents	0.01 %	0.04 %	0.03 %	0.05 %	400 %
PC Drug Incidents	1.68 %	2.20 %	4.67 %	6.52 %	290 %

An examination of Table 1 indicates that police agencies participating in NIBRS in 1991 reported about 617,000 incidents for 364 cities and towns. The total population for these places in 1991 was approximately 3.6 million persons. By 2010 there were 3,250 police agencies, reporting 5.5 million incidents for cities and towns representing 43.7 million people. We can

see in column 5 of Table 1 that reported murder incidents increased by 377 percent from 1991 to 2010. However, drug incidents increased by 3,368 percent in this period. Lines 6 and 7 of Table 1 indicate that murder incidents made up less than one-tenth of one percent of all incidents reported each year from 1991 to 2010, while drug incidents grew from almost two percent to about 6.5 percent of all incidents reported in the same years.

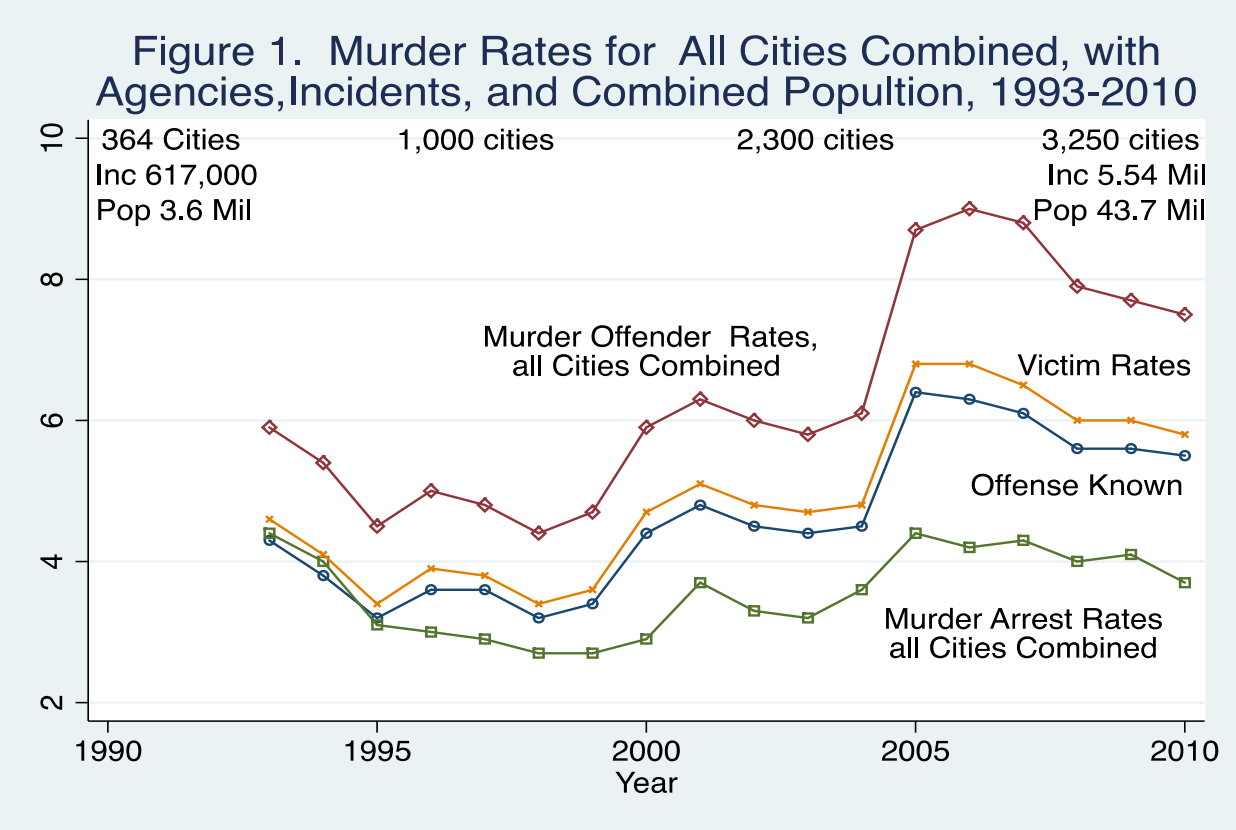
Like the regular growth in participating agencies, another limitation of the early NIBRS data was the loss of data that occurred when agencies withdrew from the program. In 1991 and 1992, police agencies in Alabama, including Birmingham and Montgomery, participated in the NIBRS program, but most Alabama agencies did not participate after 1992. This made some of the summary information for 1991 and 1992 very different from the information provided from 1993 to 1995, and for this reason it seemed less confusing to have most of the trends start in 1993.

The distinct advantage of NIBRS data over data in the traditional UCR approach is that in NIBRS drug offenses, and other offenses for which there are no identifiable victims, are counted as offenses known to the police. As a result, it is possible to compare drug offense known rates in NIBRS with offense known rates for violent and property crimes. In fact, NIBRS makes it possible to create a separate measure of "crimes without identifiable victims" by combining drug, gambling, prostitution, and obscenity offenses known to the police. This can be done in NIBRS but it cannot be done using traditional UCR offenses known to the police because crimes without identifiable victims are not included in the traditional counts of offenses known to the police. What used to be called the crime index includes violent and property crimes but no drug, gambling, prostitution, or other crimes without identifiable victims. In the traditional UCR effort, crimes without identifiable victims are counted only in the Age, Race, and Sex arrest reports. If such crimes were routinely reported along with property and violent crimes we might not have been puzzled by a continuous growth in incarceration as reports of crime "in general" decreased after 1993. Crimes without identifiable victims are called crimes against society in NIBRS reports. However, the distinguishing characteristic of these offenses is that no attempt is made to provide the age, race, or sex of victims for these offenses.

Comparing Annual Rates

Because NIBRS is an incident-based system, to create a set of annual murder counts it is necessary to count all murder incidents reported by all agencies each year. When these murder counts are divided by the combined annual populations of all agencies submitting incidents, and multiplied by 100,000, offense known rates are available for each year. In the charts presented below, these rates are called murder offense known rates or drug offense known rates. NIBRS reports contain information on the race, sex, and age of all known murder offenders, almost all murder victims, and all those arrested for murder. This permits the creation of murder offender rates, murder victim rates, and murder arrest rates for each year in addition to the offense known murder rates. Offense known rates should not be confused with offender rates.

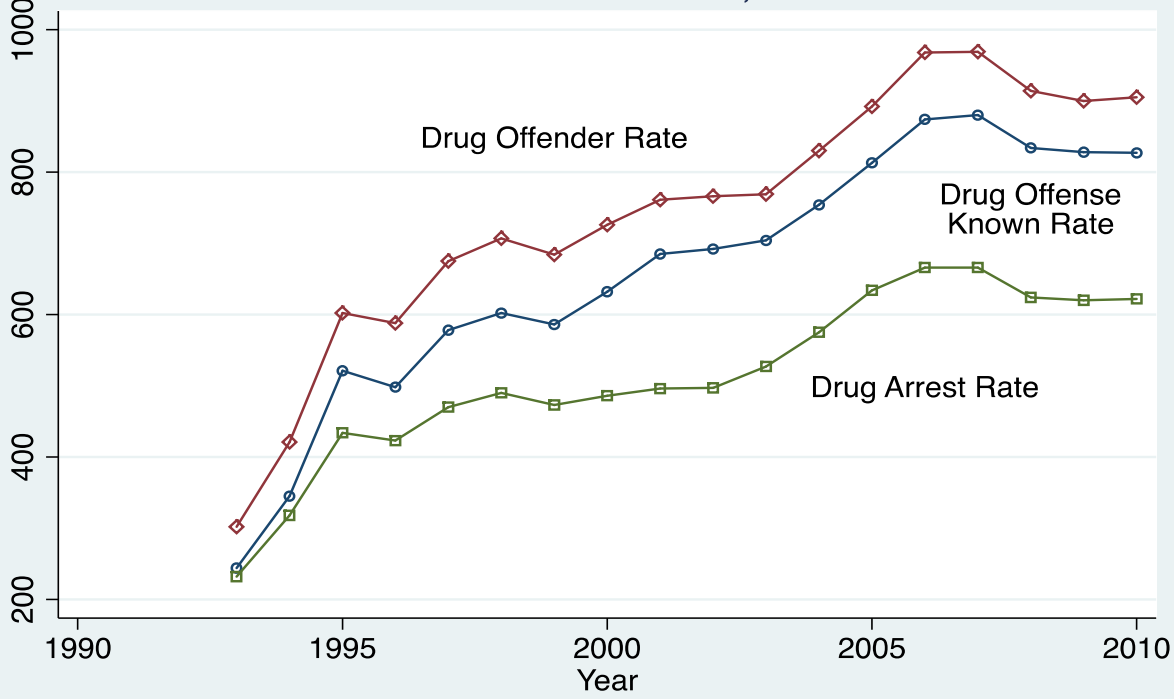
Figure 1 contains the trends for these four murder rates as the number of participating agencies grew from 364 in 1991 to 3,250 in 2010. The similarity of the trends for victim rates and offense known rates indicate that traditional offense known murder rates are essentially victim rates, but they are victim rates that provide no information on characteristics of victims. In NIBRS, it is the victim rates that provide information on the race, sex, and age of victims. The murder offender rates are higher than the murder arrest rates because not all offenders are arrested, but witnesses can provide information about the offenders even if they are not apprehended. The most important thing to notice in Figure 1 is that the rates range from about 3 to 9 per 100,000. We see in Figure 2 that the drug rates are about 100 times higher, ranging from about 300 to 900 per 100,000. This is important when we discuss some possibilities for reducing racial disparity in incarceration rates. Another important trend in Figure 1 is the drop in the offense known murder rates from 1993 to 1995 and the subsequent increase in the offense known murder rates from 1995 to 2005.



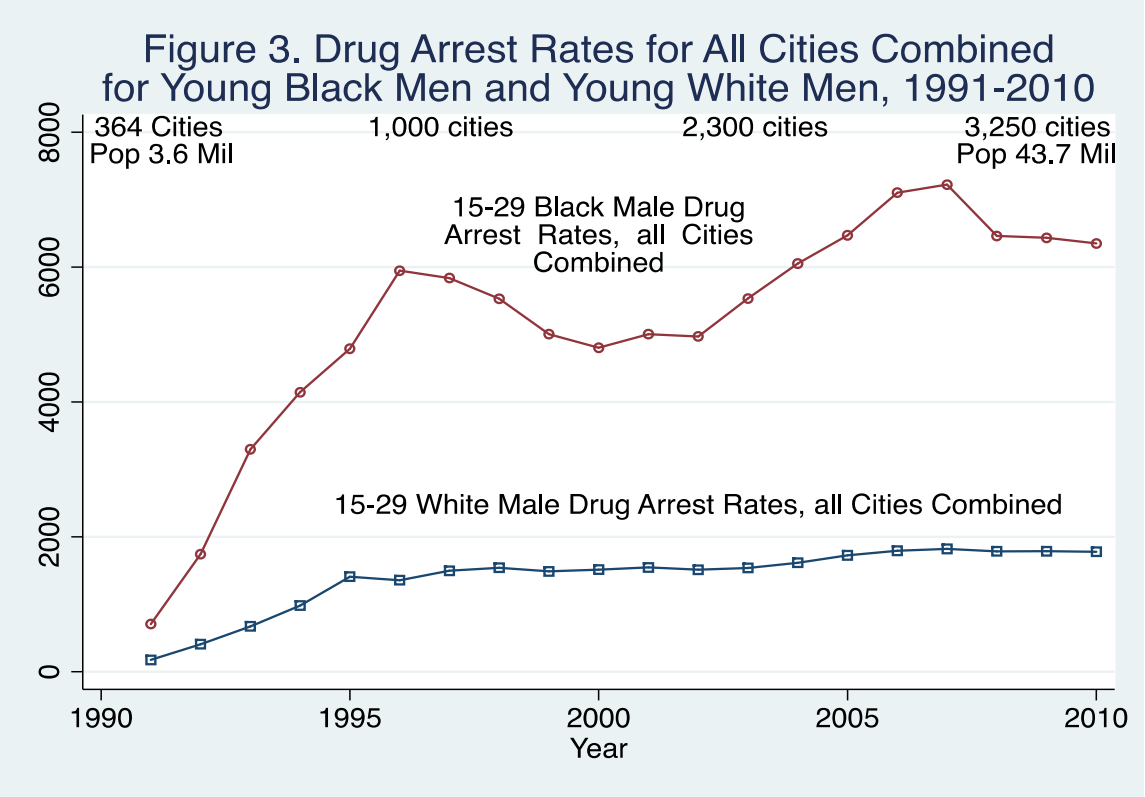
The sharp increase in the offense known murder rate from 2004 to 2005 may have been produced by the entry into NIBRS of a few large cities in 2005. Something similar may have happened in 2000. This issue is discussed below, but at this point, the difference in the size of the drug rates when compared with murder rates is more important. In some ways, the trends for drug rates shown in Figure 2 are similar to the trends for murder rates shown in Figure 1. In both cases the offender rates are higher than the arrest rates, but the drug trends differ from the murder trends in two important ways. First, there is no drug victim rate because

there are no identifiable victims for drug crimes. Second, drug crime does not decrease from 1993 to 1998. It increases sharply and continues to increase until 2006. Other than this steady increase, the most important difference between the murder and drug crime rates is that the drug rates are much higher than the murder rates.

Figure 2. Total Drug Offense, Offender, and Arrest Rates for for All Cities Combined, 1993-2010



Additional information in NIBRS about offenders and those arrested makes it possible to create drug arrest and drug offender rates for race-sex-age categories, and this makes it possible to identify race-sex-age categories with very high arrest rates and to compare these trends with the trends for other race-sex-age categories. The 15 to 29 year old black male drug arrest rate in Figure 3 rises from about 3,000 per 100,000 incidents in 1993 to 6,000 per 100,000 incidents in 1996. It then decreases to about 5,000 per 100,000 in the year 2000 before rising to about 7,000 in 2007. The 15 to 29 year old white male drug arrest rate never reaches 2,000 per 100,000. This means the drug arrest rates for young black men are much higher than drug arrest rates for 15-29 year old white men and ten times higher than the overall drug arrest rates. It is almost as if six percent of all young black men in these places were arrested every year for drug offenses. This is not actually the case because some of the same individuals may be arrested more than once during the same year. Still, 6,000 per 100,000 (six per 100) is a very high rate that must contribute heavily to prison but especially to jail incarceration rates.



The murder trends in Figure 4, like the drug trends in Figure 3, focus on arrest rates for young black men. However, the rates shown in Figure 4 include trends for victim and offender rates. Just as the overall murder rates decreased in the mid-1990s, murder rates for 15-29 year old black men decreased from 1993 to 1995, decreased again from 1996 to 1998, before increasing from 1998 to 2007. The murder rates for 15-29 year old white men remained low for the whole period. However, while drug arrest rates were rising from 5,000 to about 7,000, murder rates for young black men were increasing from about 55 per 100,000 in the year 2000 to about 125 per 100,000 in 2007. This is a sizable difference between drug rates and murder rates and an important indicator of violent crime. It is in this way that the NIBRS data call into question assertions that increased drug arrests reduce violent crime.

In addition, although large in comparison with white male and other race-sex-age categories, the murder rates for young black men are relatively low when compared to the drug arrest rates for young black men. Even at 100 per 100,000, the murder rate would have to be multiplied by a factor of 60 to be comparable with the drug arrest rate for young black men. This calls into question the suggestion that the black-white disparity in prison and jail populations would continue even if the drug war ended. Figure 5 contains the NIBRS arrest rates for murder, robbery, rape, and aggravated assault. Even when these arrests are combined, they do not offset the number of drug arrests that would end with an end to the drug war. Figure 6 focuses on arrest rates for 15-29 year old black men and suggests that the number of young black men that would be removed from the prison or jail track by an end to the drug war is very large.

Figure 4. Murder Offender and Victim Rates for All Cities for Young Black Men and Young White Men, 1991-2010

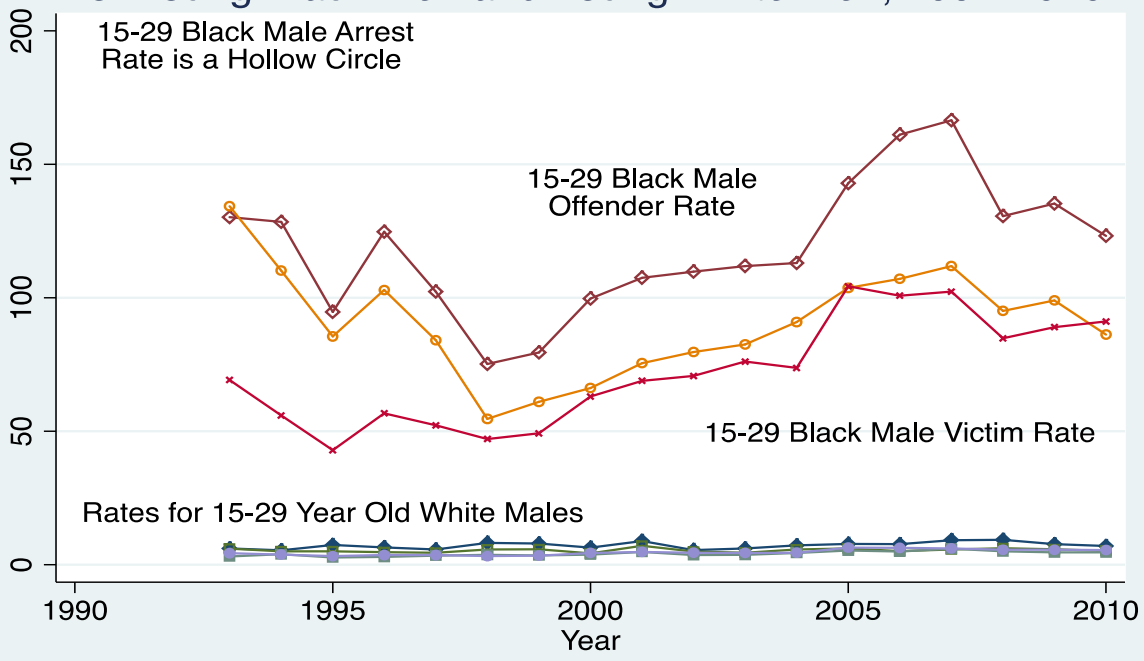
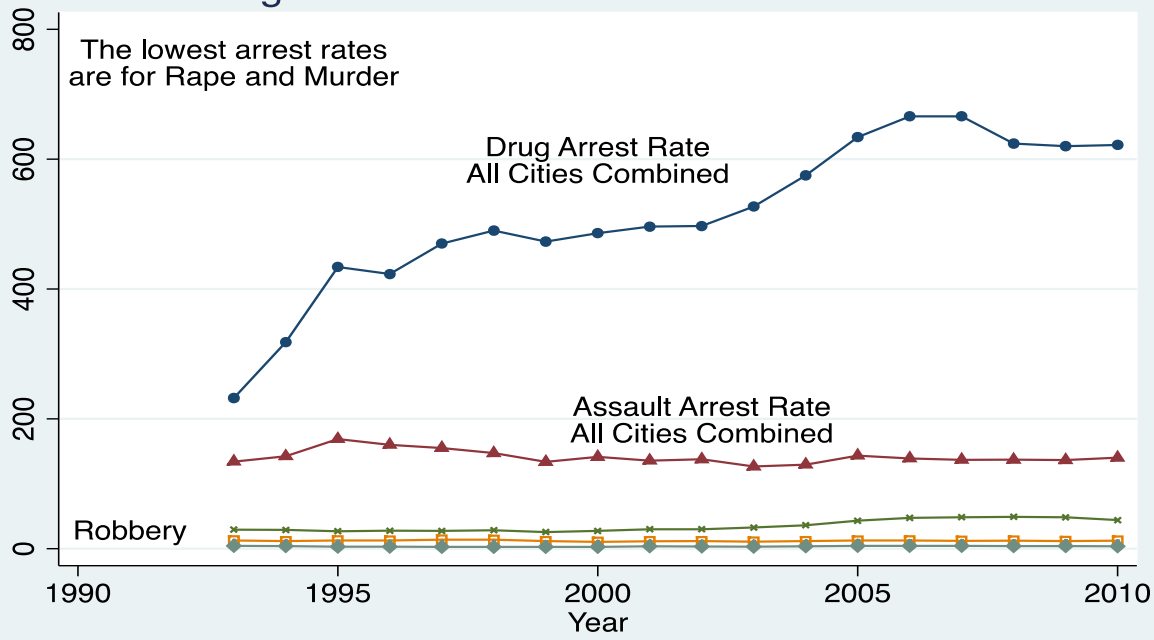
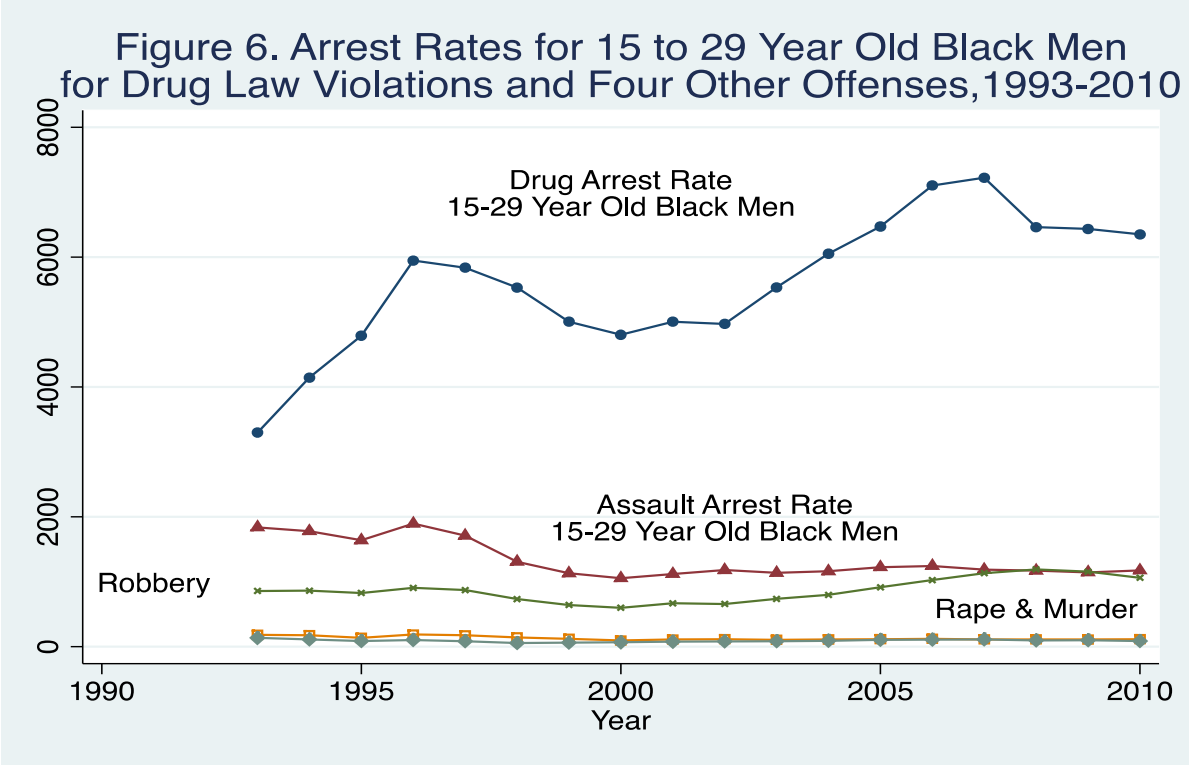


Figure 5. Total Arrest Rates, all Cities Combined, for Drug Law Violations & Four Other Offenses





The Impact of Participation by Large and Small Cities

Returning to a major limitation of NIBRS, the fact that it is not yet national in scope and is a constantly developing program, we explored the possibility that NIBRS murder and drug trends reflect the increasing participation of some large city police departments. To do this, we counted drug and murder offenses for all cities that had populations over 100,000. We then combined the population of all cities in the set in order to create annual drug and murder offense rates for large cities for 1993 to 2010. After we did the same thing for cities and towns with populations lower than 100,000, we compared the murder and drug rate trends for the large cities with the trends for small cities and the trend for all cities combined.

Figure 7 presents the results for murder offenses. It is important to remember that the number of large cities changed almost every year. In 1995 there were only six police agencies in NIBRS representing cities with populations of this size. By 2000, there were 33 cities with populations this large. The number grew to 47 by 2005, and this number was still only 54 in 2010. Cities that entered the program in in 2000 included Memphis, New Haven, and Richmond. Cities that entered NIBRS in 2005 included Detroit, Denver, and Fort Worth, While more large cities were starting to use NIBRS from 1995 to 2010, the same was true for small cities and towns. In 1995, there were 667 police departments from cities with populations less than 100,000 in the program. By 2000, there were 1600 with such populations, by 2005 2,700, and by 2010 there were almost 3,200 agencies representing cities with population of less than 100,000.

The offense known murder trends in Table 7 indicate that the combined murder rates for small cities went down slightly and remained low from 1998 to 2010. The set of cities we have described as large cities presented a very different pattern. After dropping from 6 to 4 per 100,000, the offense known murder rates for this set of cities changed little for stretches of three or four years, but increased sharply from 1998 to 2000 and from 2004 to 2005. Toward the end of the period, the offense known murder rates for large cities remained around 10 per 100,000.

The patterns shown when we compare drug offense trends for large and small cities is very different from the patterns shown for murder offenses. An examination of Figure 8 indicates that the offense known drug rate increased sharply from 1993 to 1995 for large and small cities. Large city offense known drug rates fluctuated from 700 to 800 per 100,000 from 1995 to 2002 before rising above 800. However, the drug offense rate for small cities increased steadily from 400 per 100,000 in 1995 to over 800 per 100,000 in 2006. The rates for both sets of cities remained at this level from 2006 to 2010. *The increases in drug offense known rates for large and small cities is important because it indicates that the impact of the drug war was not limited to large cities.* It suggests the drug war had an impact on smaller cities and towns in different parts of the country. This finding is quite different from those reported by Belyea and Zingraff (1985) and Castellano and Uchida (1990). However, these studies focused on rural urban differences rather than large and small cities. Both studies found that rural drug arrests were significantly lower than urban drug arrests.

Figure 7. A Comparison of Murder Rates for Cities with Populations Over 100,000 with Murder Rates for Cities with populations less than 100,000, 1993-2010

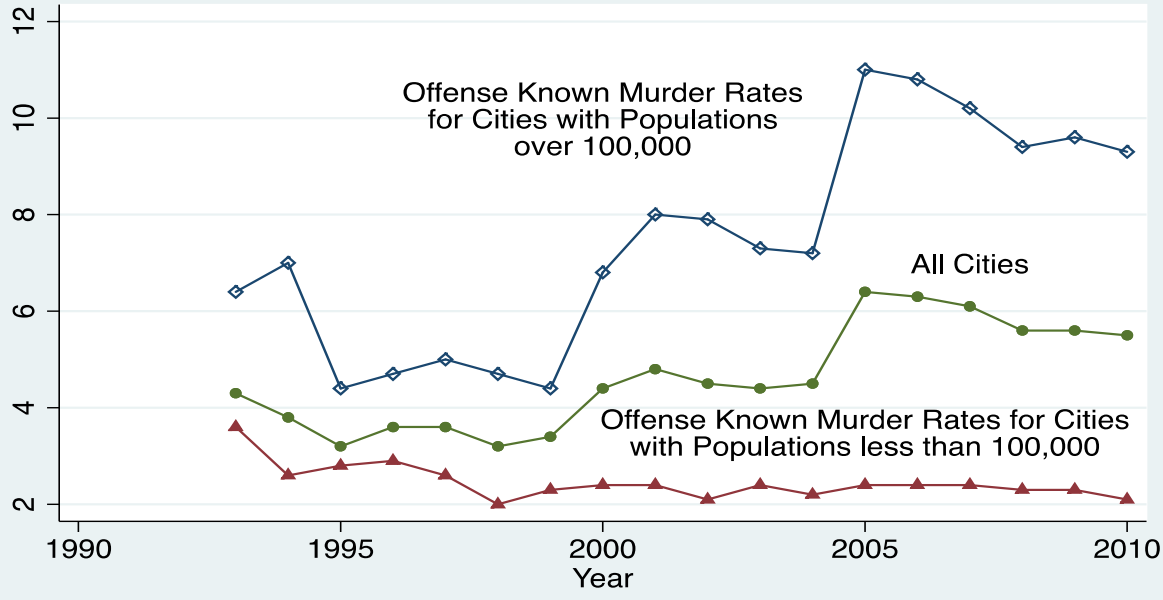
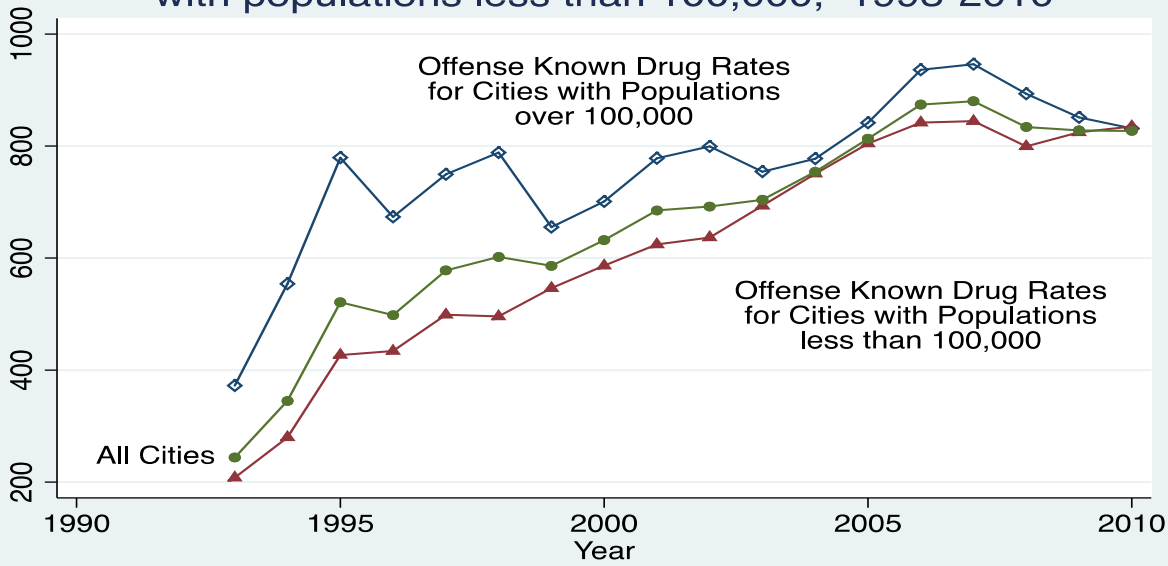


Figure 8. A Comparison of Drug Rates for Cities with Populations Over 100,000 with Drug Rates for Cities with populations less than 100,000, 1993-2010



Discussion and Conclusions

The patterns shown in Figures 2, 3, 5, and 6 suggest possibilities for reducing racial disparity in imprisonment and for reversing the growth of incarceration in the United States. Repealing the laws that make it a crime to use specific mood altering substances, especially cannabis, would have sizable impacts of both trends. Arrest rates for violent crimes indicate that racial disparity in incarceration rates would continue after changes in drug laws, but Figures 5 and 6 suggest that such differences would be greatly reduced.

In addition, if these patterns are replicated when a much larger set of cities are examined, the results will provide support for Michelle Alexander's suggestion that most of the increase in prison and jail populations in the United States since at least 1994 is the result of enforcement practices that target young black men (2010). Reproducing these results for a larger set of cities can only be approximated because the traditional, non-NIBRS, UCR program does not provide offense known counts for drug crimes. However, the traditional UCR program does provide drug arrest counts by race and by age and sex. Therefore, it is possible to compare drug arrest rates with arrest rates for violent crime, and to compare these rates for large and small cities. The trends shown in Figure 1 indicate that murder and drug arrest rates will be lower than murder and drug offense known rates, but if the patterns in Figure 8 are reproduced when arrest rates for a more complete set of cities and towns are used, we will have an even more convincing picture of the impact of drug offenses on racial disparity and the growth of incarceration in the United States.

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*The Fates of Defendants Convicted in Capital Punishment Trials: A Long-Term Analysis**

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The criminology and criminal justice literature is marked by a large volume of research concerning the use of capital punishment in the United States. This literature includes a segment devoted to analyses of how those receiving death sentences fare in the appeals process (Baumgartner & Dietrich, 2015; Butterfield, 2000; Liebman, Fagan, West, & Lloyd, 2000). Largely missing from voluminous death penalty literature is (1) a long-term analysis of how defendants receiving death sentence fare on a long-term basis following their conviction (in addition to their appeals), and (2) the fates of those receiving sentences of life in prison in lieu of a death sentence.

Addressing this void, this research provides a long-term analysis of post-conviction outcomes for a population (N=1,006) of defendants in North Carolina convicted of, or pleading guilty to, first-degree murder and for whom the death penalty was sought by the state, resulting in a jury recommendation for death or life in prison. The period of the analysis covers 1977-2012. The first year marks the year that capital punishment was reinstated in North Carolina following the 1976 U.S. Supreme Court decisions in *Gregg v. Georgia*, *Roberts v. Florida*, and *Jurek v. Texas*. The analysis runs through 2012, the last year allowing minimal time for a subsequent post-conviction event to occur.

Method

The majority of the defendants in the analyses were identified as part of a dataset developed under the auspices of the North Carolina Capital Sentencing Project (see Kavanaugh-Earl et al. [2007] for a description). However, that data covers through 2009, so to extend coverage, all capitally-convicted defendants in North Carolina for the years 2010-2012 were identified for follow-up. Ultimately, 1,006 individuals were identified as the population of defendants tried capitally in North Carolina during 1977-2012. The following considerations were employed in the long-term tracking that was employed:

- The 1,006 number reflects individual defendants, *not* the number of individual sentences, assessed during 1977-2012.
- Defendants were tracked on the basis of the most serious penalty they were assessed. That is, if receiving both life and death sentences in a multiple-victim trial, or a life and a death sentence in separate trials, the defendant's tracking classification was for the death penalty.
- As reference, 396 (39.4%) defendants received at least one death sentence in their trials; 610 (60.6%) received life sentences only.
- The tracking was based on the original capital trial. Tracking classifications captured retrials and other subsequent judicial developments in their cases.
- The data reported are current as of June 10, 2015.

- It is recognized that the meaning of "long-term" varies considerably for the defendants tracked in this study, ranging from 2 to 35 years. However, the data collected reflect the current state of outcomes for the entire population of individuals meeting the operational definition of the study – in essence, all defendants subject to capital punishment trials in North Carolina across a span of 35 years.

Follow-up analyses were conducted for each defendant. This involved extensive searches of state and federal court decisions, newspaper accounts, and the internet. On the basis of materials discovered, post-conviction developments were coded into categories designed to be as exclusive as feasible. Ultimately, 123 separate long-term outcomes were identified. However, in the discussion that follows, categories are aggregated into groupings that, in the interest of space, best capture the essence of the long-term outcomes.

Results and Observations

The current status of the 1,006 defendants is presented in Table 1. As shown there, only 43[1] (4.3%) individuals were executed,[2] while 146 (14.5%) are currently on death row in North Carolina or another jurisdiction. The largest number, 594 (59%), are still in prison serving terms other than death sentences. Interestingly, 89 (8.8%) of the individuals tracked were found to have died in prison. Also of interest, 120 (11.9%) completed their prison terms and have been released.[3] In developments that received much attention, six individuals had their death sentences overturned and, when retried, were found not guilty. Further, five individuals had evidence emerge that exonerated them from the crime of which they had been convicted. Finally, three individuals are currently in prison awaiting a retrial following the overturn of their convictions.

Table 1. Summary of Current Status of Capitally Convicted Defendants (N=1,006)

Current Status	n	% of Defendants
Executed	43	4.3
On Death Row in NC	144*	14.3
On Death Row in other jurisdiction	2	.2
Serving Life or Lesser Sentence	594	59.0
Died while in prison	89	8.8
Released at conclusion of sentence	120	11.9
Found Not Guilty at retrial, released	6	.6
Exonerated while in prison, released	5	.5
In prison awaiting retrial	3	.3
Total	1,006	99.9**

*Includes 9 individuals whose initial appeals to the North Carolina Supreme Court have not been decided.

**Does not equal 100% due to rounding.

During the course of the analysis, it was discovered that the post-conviction fates of defendants was very much related to their experiences through the appeals process. Notably, this fate was not necessarily determined by an initial appeal. Indeed, appeals at various judicial levels continued for years, affording the defendants numerous "bites at the apple" in having their convictions and (more likely) death sentences vacated. Some individuals had as many as three trials in which they received two death sentences for the same crime before receiving a lesser sentence in the third trial. In a number of cases, sentence reductions resulted from emerging federal legislation (e.g., age of the defendant, IQ minimums, mitigation procedures) not in effect at the time of the trial. In more recent years, overturns of death sentences have occurred more frequently in local (superior) courts. Often, the reasons appear to reflect second and third guessing by court officials well in arrears of the actual proceedings, sometimes marked by a total absence of anyone involved in the original trial except the defendant. Because of its impact on the fate of those convicted, a summary of how defendants fared in the appeals process is presented in Table 2.

Table 2. Summary of Appeals Outcomes for Capitally Convicted Defendants (N=1,006

Sentence and Result of Appeals Process*	n
Death, All appeals denied, Executed	34
Death, Conviction or Sentence Overturned, Resentenced to Death, Executed	9
Death, All appeals denied (to present), On Death Row	121
Death, Conviction or Sentence Overturned, Resentenced to Death, On Death Row**	16
Death, Initial appeal pending, On Death Row	9
Death, All appeals denied, Died on Death Row prior to execution	17
Death, Conviction or Sentence Overturned, Resentenced to Death, Died on Death Row	4
Death, Prior to initial appeal, Died on Death Row	2
Death, Conviction Overturned, Ultimately resentenced to Life or Lesser Term	45
Death, Sentence Overturned, Ultimately resentenced to Life or Lesser Term	121
Death, Conviction or Sentence Overturned, Died before retrial	2
Death, Conviction or Sentence Overturned, Acquitted or Exonerated prior to retrial	8
Death, Conviction or Sentence Overturned, retrial pending	3
Death, All appeals denied, Sentence Commuted to Life by Governor	5
Life, All appeals denied (to present)	575
Life, Appeal denied, Sentenced to death for murder in another state, Death Row there	1
Life, Conviction Overturned, Resentenced to Life or Lesser Term	22
Life, Conviction Overturned, State opted not to retry	8
Life, Conviction Overturned, Acquitted or Exonerated prior to retrial	4
Life, Conviction Overturned, Retrial pending	1
Life, Initial appeal pending	2

*Outcomes for those dying in prison or who have been released are included in these figures.
**Includes one individual on federal Death Row.

A highlight to be gleaned from Table 2 is that 44.4% (n=176) of individuals originally receiving a death sentence have been removed from Death Row through the appeals process (an additional five have received commutations from the governor). However, many of those on death row continue to have active appeals underway, and the number of vacated death sentences will likely escalate over time.

However, the "action" involving post-conviction appeals is not limited to death sentences, and our analysis revealed considerable appeals activity in regards to life sentences. The relative lack of success in this arena is rather striking, with only 35 individuals being successful in having their convictions overturned, and 22 of those returned to prison on reconviction via plea to a lesser offense. One person awaits retrial, and two have yet to have an initial appeal decision returned.

All told, our analysis revealed the impact of the appeals process in greatly reducing the impact of initial jury decisions in capital murder proceedings. Impressionistically, this impact is in force for years after the original trial, and the sheer complexity of the processes involved is striking. In a handful of cases, this persistence has led to the exoneration of the convicted person. In other cases involving conversion of death sentences to life sentences, it appears that the imposed life sentences are occurring as a result of changing cultural norms as much as specific or reinterpreted legal elements of those cases.

On a somewhat different note, nearly 9% of those sentenced have died in prison. The causes of their deaths is most often cited as being "of natural causes," but determining more definitive causes might be worth exploring, including the number who committed suicide (this information is not readily available). Of equal interest is that that roughly 12% of those individuals convicted of first-degree murder not only survived a capital hearing, but served the entirely of their sentence and were released (prior to the imposition of life without parole; see footnote 3). In some cases, these individuals originally received a death sentence, but upon retrial were given a life sentence that they completed and were released. For them, it was indeed a new "lease on life." A follow-up analysis of these individuals (or their counterparts in other states) would be highly informative, but would require an enormous undertaking. A more manageable project would simply focus on the criminal recidivism of these individuals, and will be considered in future research.

Notes

[1]Given that 396 individuals received at least one death penalty, 43 represents a sentence-to-execution proportion of 10.9%, a figure well below the national average of 24% cited by Baumgartner & Dietrich (2015), suggesting a very "inefficient" system of capital punishment.

[2]This figure unquestionably has been influenced by a *de facto* moratorium on executions in North Carolina since 2006, one that has remained in place despite a decided conservative shift in the state legislature and governor's office during this decade. Also, the imposition of death penalties by juries has declined substantially over the past half decade, as well as prosecutors, not unrelatedly, seeking the death penalty.

[3]Historically, persons sentenced to life in North Carolina were eligible for release after serving 20 years. As of October 1, 1994, the North Carolina legislature made conviction of first-degree murder punishable by life in prison without parole (aka LWOP). Anyone convicted prior to that date was still eligible for release after minimum time served, typically 20 years. Individuals released included those who completed their capital conviction sentence and those who, through the appeals process, had their convictions reduced to lesser charges and served out the mandatory time, albeit shorter, for that level of offense.

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*This is a revised and updated version of a poster presented at the 2014 American Society of Criminology meetings, Atlanta. The co-authors of that poster, Drs. Beth Bjerregaard, Sondra Fogel, and Janine Kremling, graciously agreed to this work being delivered as a single-authored presentation for purposes of the 2015 Homicide Research Working Group meetings.

The relationship between the Kendall murders and the plot of The Chinese Parrot

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"Truth is rare fruit in garden of murder."
Earl Derr Biggers

Introduction

Fiction involving murders is not always a complete fabrication by the author. In some cases, the author may reveal that his story is based on or inspired by an actual event. George R.R. Martin, wrote the books that the HBO series **Game of Thrones** is based on. He attributes his inspiration for the mass murder of the Stark family in the Red Wedding scene to two situations in Scottish history where the custom of safe passage was broken. Davis Grubb based **Night of the Hunter** on Harry Powers who committed multiple homicides in West Virginia. Alfred Hitchcock said that the murders committed by Earle Leonard Nelson gave him the idea for his script **Shadow of a Doubt**. In these examples, real events provided material for the authors' creativity.

Earl Derr Biggers is most famous for writing six murder mysteries featuring Honolulu police detective Charlie Chan. After his first Chan book **The House Without a Key** was published, he revealed that a major plot device (the murderer swimming from an anchored ship to commit his crime in a beach front house and then swimming back before the vessel docked) was formulated while he and his family vacationed in Honolulu. He also commented that a Honolulu police detective of Chinese extraction had much in common with his inimitable Chan.

In his second entry of the Chan series, **The Chinese Parrot**, published in 1926, Biggers never revealed publicly if an actual murder provided any of the plot devices. I suggest the murder of the Kendall family that occurred in California in 1910 offers a number of facts that may have been incorporated in the book. Attributing the source of "inspiration" to a writer of murder fiction is often a mixture of conjecture and germane aspects. I will highlight several aspects of the Kendall case and then mention some portions of the plot in **The Chinese Parrot** that are similar.

The Murders of the Kendall Family

"Conflicting stories result in a tangle of evidence so confusing that the case develops into one of the deepest mysteries with which detectives have had to deal with for years."

Chronology of the Kendall Case (8/7/1910) Oakland Tribune, p. 20.

1910

The Kendall family consisted of Enoch, Una, and their thirty-one year old divorced son, Thomas. In March of 1909, they signed a three-year lease and became tenants on Margaret Starbuck's Cazadero Ranch. The 1,000 acre property included 300 head of livestock and a

ranch house, barn, and granary surrounded by a wooden slat fence. In addition, there was a cabin on the property. The Cazadero Ranch was isolated and the nearest town was Santa Rosa. Margaret lived over sixty miles south in Oakland with her husband, Henry, known as H.F. and her daughter Chrystal.

By the summer of 1910, a number of converging forces would result in the murder of the Kendall family. Margaret became an adherent of Shintoism and decided to build a temple on the ranch. She stated that not only would it be a refuge and a home to her Japanese friends but also open to all children of God. She began legal proceedings against the Kendalls to break their lease, accusing them of problematic behavior, including the abuse and theft of her livestock.

Margaret then hired Manjiro (Henry) Yamagachi to live at the ranch in the small cabin. After he graduated from high school in Japan, he immigrated to San Francisco, took a bookkeeping course, and started work for a firm in the middle of August 1909. Yamagachi was fired two months later because of his mental instability.

Prejudice against Asians in California was high. Thomas Kendall had a hatred of the Japanese as well as a quick temper. A neighbor would later say that he had leveled a gun at Thomas for self-protection. The Kendalls viewed Yamagachi as Margaret's spy and felt his only purpose at the ranch was to gather information that would be used to displace them from their home. On Monday, July 25th, during the evening, Yamagachi and the ranch dog, a black collie shepherd mix, arrived at the Starbuck home. Yamagachi told Margaret they had walked 14 miles from the ranch to the railroad station at Guerneville and both taken the train to Oakland. Margaret said he was talking like a crazy person, and she phoned her husband to come home from his office. Mrs. Starbuck would later say to the police that Yamagachi had told her in the presence of her husband, and her daughter, "Tom Kendall struck and then shot at me. I then shot them. I did them all up." He then told Starbuck that a mirror in his coat pocket had stopped the bullet. When H.F. examined his coat and found no hole in it, Yamagachi said he had left the damaged coat at the ranch. H.F. advised him if he had shot Tom in self-defense, the law would protect him. Yamagachi replied, "My life is no good—I will end my life." The Starbucks left him in the living room to discuss the matter privately. They felt he was insane and when they went back to the room where they had left him, he was gone, leaving the dog. H.F. telephoned his attorney, H.W. Brunk, in Berkley and shared Yamagachi's assertions. Both agreed it was either the babblings of an insane man or an exaggeration of a disagreement. Brunk telephoned an attorney he knew in Santa Clara the next day who said if the murders had occurred, he would have heard about them, which he had not. It took another week until the Starbucks learned that the Kendalls had actually been murdered.

The Kendalls had last been seen alive on July 23rd and almost a week later, neighbors visiting the ranch, found the livestock starving and contacted the sheriff. When the sheriff and his posse arrived on August 1st they found a blood-soaked cot and blood-spattered walls on the porch, then they searched the area on horseback. Initially, they found nothing but then discovered the first human remains two days later. Some body parts were burned in the oven, and it is thought their flesh was fed to the hogs. A woman's spectacles and hair comb were

found in the grate of the stove and teeth and charred flesh were found outside. In the ashes was a wedding band with T.A.K. on it. A bloody ax was discovered buried in the garden of the ranch.

An Oakland dentist, Charles B. Goodman, positively identified the teeth still left in the jawbone as Thomas Kendall's who had been his patient. District Attorney, Clarence F. Lea, felt the Kendalls had been killed with a rifle kept at the ranch and shot from ambush. Una was killed first as she worked in her garden, then her husband was killed when he came home from hunting, and finally Thomas was killed when he came home from visiting Crosper's Resort. Yamagachi was never arrested for the crime and disappeared. It was conjectured that he may have gone into the wilderness and committed suicide. Some in the Japanese community doubted his guilt, because though murders occurred in Japan, no murderer had ever dismembered and burned corpses.

H.F. Starbuck divorced Margaret shortly after the grand jury proceedings and quickly remarried. It was felt by many in the community that she was guilty of obstructing justice, though never charged. Some newspapers advanced the theory that her nervous nature, attraction to Japanese customs, and legal battle with the Kendalls laid the foundation for the murders. Yamagachi's psychological state and the Kendalls' xenophobia added volatility to the mix.

The Chinese Parrot

"Most of the story is in the desert and it has to do with a parrot who shrieks in the moonlight, a necklace, and a Chinese detective."

Romance (9/26/1926). Oakland Tribune, p. 61.

Earl Derr Biggers had visited Pasadena, found that the climate was good for his health, and bought a home a few miles south in San Marino in 1925 and **The Chinese Parrot** was published in 1926. **The House Without a Key** had sold well and the publisher wanted another Charlie Chan murder mystery written as quickly as possible. It is probable that when Californians were informed that Biggers wrote about fictional murder mysteries, they provided him with their thoughts on their state's own mystery, the triple murder at Cazadero Ranch. In **The Chinese Parrot**, Biggers would transport Chan from Honolulu to California and center the action on a remote ranch located in the desert. Besides the locale, there are a number of other plot elements that are similar. For example, in the Kendall murders, it is approximately a week between the killings and local government officials arriving at the ranch. In the novel, it is a week between the kidnapping of P.J. Madden and the discovery of a doppelganger. The disappearance of the Kendalls was not officially verified by the authorities until over a week after their deaths. It was then days before bones and jewelry were discovered and the remains of Enoch and Una were established. At this point, some thought their son may have killed his parents and fled. It was not until his jawbone was identified by his dentist that the police knew the whole family had been slaughtered.

The key twist in **The Chinese Parrot** is when fabulously wealthy P.J. Madden (not a stretch to say he was based on J.P. Morgan) is certain that he has shot and killed a visitor to his ranch, one who had passed himself off as Madden for the purpose of fraud long ago in New York. Then Madden is blackmailed. In reality, it is all part of a hoax to extort money and he has not killed anyone. In the novel, the supposed victim of murder was alive while in the Kendall case, the son, presumed living, is actually dead. Madden is fabulously wealthy, while the Starbucks are moderately wealthy. Madden only stays at his ranch a short time each year as does Margaret Starbuck.

The Starbuck's ranch dog was Yamagachi's companion he left in Pasadena. The police took the dog back to the ranch and felt that he would be a key to solving the crime, though it was never revealed what help he would provide. In **The Chinese Parrot**, the cook was Chinese and his pet parrot would repeat some of the things he muttered in Chinese and also repeat a phrase that he had heard the night of the purported murder. The cook is murdered, and Chan is able to hear some of the parrot's phrases before the parrot is killed. This provides Chan with a key clue to solving the case.

Conclusion

The following was a short review of **The Chinese Parrot** when it was published.

> A few people can write a corking straight mystery story, fewer can write a really humorous story, but very few can write a combination of both, and among those who can, Earl Derr Biggers is pre-emienent (sic). Here is the humor and wit—gay young humor, and careless wit. And here is a fine plot which is ingeniously contrived and perfectly served.
>
> The California desert, with its deformed Joshua trees, its vast expanse of sand, its incredibly near stars, under tremendous night, is the location. But we have glimpses of San Francisco and Hollywood with streets showing "living examples of what the well-dressed man and woman will wear if not carefully watched." **The Chinese Parrot** (September 11, 1926) Hamilton (Ohio) Daily News, p. 32

There is no "humor or wit" in the murder of the Kendall family. If he knew, Biggers was able to change the facts to fit his needs and create a marketable piece of fiction. It may be that the author subconsciously absorbed the facts, and was not aware that his imagination was sparked by them.

It also may be the case that the Kendall murders were not known or used by Biggers. As Burkeman (2015) stated in his article dealing with the challenges in defining consciousness:

> To look for a real, substantive thing called consciousness, Dennett argues, is as silly as insisting that characters in novels, such as Sherlock Holmes or Harry Potter, must be made up of a peculiar substance named "fictoplasm"; the idea is absurd and unnecessary, since the characters do not exist to begin with.

Biggers, despite being a better-selling author, never attracted biographers, who might have asked him specifically if his books were based on factual events. He died at the age of 48 in 1933.

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Officers Give Theories How Family Was Slain, (8/5/1910) *Oakland Tribune*, p. 2.

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Was the Cazadero Ranch tragedy result of occult fanaticism? (8/7/1910) *Oakland Tribune*, p. 20.

The Execution of Pirates in America

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ABSTRACT

America's attitude toward piracy and pirates varied extensively between the middle third of the 17th century, when the first American pirate was executed, and the middle third of the 19th century, when the last pirates were executed. Seventeenth-century colonials appreciated the benefits of piracy, so long as American vessels and lives weren't threatened. Under British pressure and the international war on piracy, the first third of the 18th century recorded about two thirds of American executions of pirates, with additional America-related pirates executed in Europe and Africa. There was a final mini-surge related to the Latin American independence movements in the 19th century, and executions then petered out, with our last execution for piracy in 1860. Two factors stand out. First, almost all executions were for piracy-plus some other offense. Second, since an aggravating circumstance in almost all piracy prosecutions was and remains homicide, piracy's removal from the list of American capital offenses does not by itself fully explain why there have been no executions in over 150 years with none are likely to occur. For the two centuries when it was really a capital offense, piracy was always treated differently from other capital offenses.

SUMMARY

Although piracy – robbery at sea – existed in America from the time of Spanish exploitation of native wealth, it became more of an issue for the British as their colonies were being established especially after the first half of the 17th century. Since this was also a time of varying states of war between the various European nations with interests in the Americas, efforts to punish piracy varied. From the British point of view, the 17th century produced two other problems with efforts to execute pirates in American waters. First, the American colonies were not uniformly opposed to piracy. Pirates were interested in acquiring valuable metals, money, and merchandise being carried by vessels in the Atlantic, but especially in the trade routes on the eastern coast of Africa. Their interest in merchandise was limited to the money it could bring. Britain's view of the colonies was that they should improve the financial situation of British industry, and the various Navigation Acts were passed to limit American acquisition to those of British manufacture or from British merchant ships. Pirates offered a way out of the monopoly, one which colonials appreciated, much as they appreciated smugglers in the years leading up to the Revolution. To 17th-century colonials, pirates were often seen as an economic benefit to society. Second, while pirates could be tried, convicted, and executed in the colonies under standard common-law procedures, and by act of Parliament in the final quarter of the 17th century, the official method called for captured pirates to be sent, along with the evidence against them, back to England, where they would be tried by Admiralty Courts, convicted, and

executed.

There were some American colonial executions of pirates in the 17th century, but those cases generally involved some other crime as well. In the first American piracy execution, in 1638 Maryland, the real offense was alleged treason. In all but one instance, pirates executed in the last quarter of the century were guilty of murder as well (Hearn, 1999). Some of the rarity involved America's fondness for the contributions of pirates to the colonies – not too dissimilar from more recent Somali leniency toward piracy off its coast. In addition, some pirates could claim to be privateers, victimizing only enemies of the British government. Indeed, the executions more commonly followed takeovers of ships by crewmen than attacks by from other ships.

In addition, throughout the most active century of American piracy, from roughly 1650 to 1750, relatively few pirate ships and crews were captured, another factor limiting the execution of pirates. As with piracy any time, pirate ships operated in a large ocean, and pirate ships were unattractive targets for capture. One of the factors that made mass executions more common when pirates were captured also made piracy more successful and capture less likely: While 21st-century pirates might outgun ships that have far more crew members but no firearms, 18th-century pirate ships were effective primarily because they both outmanned and outgunned their prey. Merchant ships along with naval and pirate vessels all had not merely handguns and long guns but other guns (which on land would be considered cannon), but merchant ships tried to see how few sailors they could overwork. Pirate ships generally aimed at having enough more manpower to discourage resistance; so long as the pirate ship also was perceived primarily as a threat to property, not to life, sailors were disinclined to resist attack.[1]

Piracy – and its suppression – increased substantially after the Treaty of Utrecht in 1713. Peace between most of the major European nations interested in American trade meant that privateers no longer had lawful occupations. So privateers became pirates. In addition, they became more violent pirates than those who had plundered in the late 17th and early 18th centuries. This led to another action that reduced the number of pirates executed even as enforcement of laws against piracy became more popular: The British established an amnesty for pirates. Pirate ships could go into an appropriate American or Caribbean port, promise to eschew piracy, and be forgiven for past actions, thus obviously limiting the risks of execution for those actions. The offer of amnesty provided a nice way for young men to leave a profession that really is a young man's game, and become ordinary citizens starting off a new career with their finances in better shape than the average man in his teens or twenties. Only resuming the pirate life, as some did, exposed relapsed pirates to execution. Enough did so that there were several mass executions until about 1726, in America, the Caribbean, England, and Africa.

The bulk of executions of pirates in the American colonies occurred in the thirteen years following the Treaty of Utrecht. There were about five instances of pirate executions in

[1] In addition to thus having a military advantage over their prey, being a sailor on a pirate vessel made service between assaults less burdensome; more men meant less work per man.

the American colonies between 1638 and the Treaty of Utrecht, resulting in 22 hangings, most of which occurred in Massachusetts. In addition, about 50 hangings following trials in London in the dozen years before Utrecht. In the next 13 years, there were another six instances of pirate executions resulting in about 62 hangings in America, again mostly in Massachusetts but with several hanged in Rhode Island, Virginia, and South Carolina. Again, about 115 more in were hanged in London and the Caribbean in 15 incidents, and another 52 associates of pirate captain Bartholomew ("Black Bart") Roberts hanged in West Africa (Espy & Smykla, 1994; Cordingly, 2006). The location of hangings was generally determined by where pirates were captured; they plied there trade throughout the Atlantic coast of America, the Caribbean, and occasionally to the east, generally with seasonal variations. So Black Bart attacked American shipping in the years before his crew's execution in West Africa. In the ensuing half-century before the Declaration of Independence, America reportedly hanged only seven more pirates (Espy & Smykla, 1994).

In America, the average number of pirates executed in each pirate execution was about 6.6, with the median of three or four; including those executed elsewhere raises the median to five and the average to almost eleven. There were a number of factors contributing to the fact that, on those relatively rare occasions when pirates were executed, their numbers were large. One obvious factor is that they their operation required relatively large crews, who were apt to be together if captured aboard ship. Perhaps more importantly, the nature of pirate life made it difficult to claim innocence or compulsion. The democratic nature of pirate life, including voting on whom to attack, made it hard to deny responsibility for the actions of the crew. The captain was democratically chosen to lead, but his authority became dictatorial only while engaging other vessels.

Each pirate's individual guilt was apt even to be in writing; pirate ships often had articles of agreement signed by members joining the crew, indicating their voluntary affiliation as well as the rules of operation, how proceeds were to be divided, along with rules of behavior (including, in general, refraining from sexual assaults on females in captive ships). The basis for some claims to compulsion was that persons on captured vessels were often invited to join the crew, and that a few were compelled because of special qualifications (like navigational, carpentry, or medical skills). Compulsion was not always deemed sufficient; men might be expected to refuse to do immoral or illegal deeds even on threat of death. Those who were really compelled to serve sometimes had written proof of the fact: they were not obligated to sign the general terms of agreement and, when in port, pirates sometimes placed advertisements in the newspaper identifying a crew member as serving under compulsion (Cordingly, 2006).

Another factor contributing to an increase in the number of convictions and death sentences in the 18th century was a change in the law. During the 17th century, while the colonial governments could try pirates, the law generally provided for pirates, their crews, and the evidence to be sent to England for trial before Admiralty Courts. But in 1700, England provided for Vice-Admiralty courts to be held in each of the colonies. Such courts differed significantly from common-law courts in that judgement was determined by a panel of judges who were representatives of the colonial government, such as the governor and customs

officers, rather than by the traditional jury of one's peers. When those officers were less hostile toward piracy, as in Rhode Island, exoneration was still possible – so that the largest execution in Rhode Island, of 26 men in 1723, has been explained partly on the basis that the chief judge of the Rhode Island vice-admiralty court on that occasion was the governor of Massachusetts rather than of Rhode Island (Williams, 1962).

One of the usual factors contributing to mass executions for other offenses – the criminals' ethnic diversity from that of the society trying them – was more limited in piracy. In colonial America, almost all of the pirates executed were probably White; there were few reports of Black, Hispanic, Asian, or American Indian pirates being executed. There were also no female pirates executed; for the most part, pirate crews were comprised of bachelors, with women unwelcomed as crew members or sexual partners on ships.[2] On the other hand, one can be an outsider without being Hispanic or non-White. Four men associated with a Dutch pirate were sentenced to die in Massachusetts in 1675, but their executions were postponed and eventually abandoned because of the distraction of King Philip's War. When six men were executed of seven pirates captured in Massachusetts in 1717, the one English-born man was exonerated, the only American-born man executed was of Dutch ancestry, and three others were from continental Europe. It is unclear whether those pirates being outsiders made much difference, since the immediate post-Utrecht period saw minimal reluctance to execute, just some effort to be fair in determining culpability.

The viciousness of the pirates was probably a more serious factor in determining whether they were likely to be executed. While piracy was, like other crimes shy of murder, a capital offense in the 17th and 18th centuries, courts were more inclined to execute pirates when their attacks included murder, and particularly if their capture had endangered their captors. Prior to the post-Utrecht enthusiasm for executing pirates, it is likely that the execution of three pirates in Massachusetts in 1673 occurred because the pirates were mutineers whose victims died, and that Captain Quelch and six of his crew were executed in 1704 in part because their piracy began with the crew overthrowing their merchant captain, and possibly killing him, and their piracy included murdering a Portuguese man on one of their victim vessels at a time of peace between England and Portugal (Dow & Edmonds, 1996; Cordingly, 2006; Sewall, 1973). And one reason for the large numbers of mass executions during the first dozen or so years after Utrecht was that pirate leaders and their gangs seemed more vicious than some earlier pirates, with senseless killings compounded by tortures. Piracy as primarily an economic crime had ended.

Another factor that increased the likelihood of execution was piratical attacks on local shipping rather than just coming into port with property stolen from other ships. This also influenced local officials to be more involved in capturing pirates, which in turn increased hostility toward the pirates by exposing local citizens to the threat of injury and death in the effort to capture the pirates (Shomette, 1985; Defoe [Johnson], 1999; Dow & Edmonds, 1996). The order of such activities might vary, with increased danger to pirates from British

[2] There were two well-known female pirates, who began service with their sex disguised. That their disguises were not completely successful is evidenced by the fact that, when captured, tried, convicted, and sentenced to die in Jamaica, they were both reprieved because of pregnancy.

authorities encouraging them to be less choosy about their colonial victims.

The execution of pirates differed in some ways from capital punishment as applied to other Whites in colonial America. While there was generally concern with allowing the condemned time to make their peace with God, with months between sentencing and execution, there was rarely such a concern with pirates, who were often given less than ten days to prepare (Banner, 2002; Defoe [Johnson], 1999; Sewall, 1973). The view was that they knew they were enemies of mankind, and, if they were concerned, should have been devoting their time between captivity and sentencing to repentance. Nonetheless, Massachusetts' pirates were excoriated between sentencing and hanging to repent, particularly by Cotton Mather, so the short period may have seemed longer.

As with other capital offenses in the 17th and 18th centuries, while convictions and death sentences were common, so were reprieves, particularly when the convict was innocent of murder. And thus not all of those convicted were executed, especially when large numbers were convicted. However, in addition to singling out the least culpable for mercy, the traditional mode of execution became worse for the guiltiest, generally the captain. Traditionally, ordinary pirates were hanged by the sea at low tide, so that their bodies were submerged (repeatedly, for a few days) at high tide. Those singled out for special punishment were hanged in a gibbet, a cage maintaining and exhibiting their bodies for years (Cordingly, 2006).

With independence, piracy became a federal offense rather than a state crime. Piracy was, however, a rare activity, with only one clear instance of pirates being executed between the American Revolution and those of various Latin American efforts to achieve independence from Spanish rule. Four sailors were executed in North Carolina in 1793 (Warren, 1926; Espy & Smykla, 1994), a time of increased concern over piracy and privateering related to the French and British conflicts related to the French Revolution.

The increased piracy associated with the Latin revolutions were complicated by details of the Constitution and congressional legislation – and Supreme Court interpretations of those actions. One issue was that many of the pirates claimed to be privateers, but serving with the approval of revolutionary governments not recognized by the United States, and thus not recognized as privateers. Another, initially, was that the first Supreme Court interpretation of the 1790 law on piracy held the definition to apply only to citizens of the United States, which would exempt the Latin American pirates/privateers from the criminal law. The law was rewritten, and applied to a large number of pirates, with pairs of pirates executed in 1820 in each of five leading port cities as a warning (Warren, 1926). Another group of six Hispanic pirates was executed in Massachusetts in 1835.

The last American executed for piracy was typical of many American piracy executions in that the offense was actually robbery-related murder. The murderer had not restricted his previous criminal activities to the sea, and the "piracy" was not an attack on one ship by men from another, but more a one-man mutiny and murder by a shipmate. Being on a ship made it a federal offense, and Albert Hicks was executed on Bedloe's Island, New York, in 1860

(Schechter, 2012). Piracy itself ceased to be a capital offense last century, but the most common forms of piracy now practiced – foreigners operating far from our shores – would be unlikely to be prosecuted in the United States absent murder, so the offense could be capital – although there is no reason it expect it ever again will be.

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Panel Session 1 Recorder Notes - Chair: Kim Vogt, Recorder: Amber Scherer
Trends and Historical Perspectives in Homicide

1) Trends in NIBRS Drug Arrest Rates and Homicide Victimization, 1995 to 2002
Roland Chilton

2) The Fates of Defendants Convicted in Capital Punishment Trials: A Long-term Analysis
Dwayne Smith

3) The Relationship between the Kendall Murders and the Plot of the Chinese Parrot
Vance McLaughlin

4) The Execution of Pirates in America
Paul Blackman
Vance McLaughlin

Q & A:

Presentation 1-
Lynn Addington – how does the NIBRS data and the quality of data, do you think the NIBRS data has the quality you want to tap into the issue you are trying to look at?

Roland – if we run this for all the agencies for which we have good data, whether they are NIBRS or not. I am convinced city by city we will see the same patterns. Chicago was arresting 60% people a year for drug offenses. I don't think I am going to find a great difference between non-NIBRS and NIBRS data. It represents a lot of small town agencies and tells us a lot of different information

Kim Davies – basically in looking at this, how do police learn about drug offenses, are they just looking for black guys to arrest?

Roland – most drug arrests are police initiated. In Chicago they talk about the west-side initiative. What they are talking about is they are going out to find drug offenders. They start with the premise that you have to go after black offenders, the police have convinced themselves. Like with prohibition, we have a bad law. Instead of police saying that, they have created a group of gangsters and talk about the terrible character of gangsters. The gangsters wouldn't make a nickel unless this stuff were legal. Instead of dismissing the law and saying this is bad law, they have convince themselves that all of the drugs are controlled by black gangs. But this is basically a police initiated activity. Because you do not have a willing witness. If you are victim of a robbery, you call the police. It is also a good reason for reporting them. The Chicago data portal, if it reported the number of people arrested by precinct. They would say what is going on here? Are we doing something wrong? It depends on your view on race. In my view it is wrong.

Adam Pritchard – when I think about the data you have here, in the context of the beginnings of the war on drugs, the idea of the war on drugs was to reduce violent crime. I think your data here is very clear, the homicide rate is going up as well so it is not having that effect. In fact you see

exactly the opposite. People make the argument that undereducated young, black men are being incarcerated at a high percentage. I think you have something here that is really getting at the root at the mythology of the root on the war on drugs.

Roland – I talk about this last year as war on drugs as the root of a criminogenic cause. But I had not yet heard the report and now I have since last year's ASC. If we could get the states to take off of the books crimes which involve what people inject, inhale, etc. and treat it how we treat alcohol, like a public health problem, it has not solved the crime problem. The drug war really started in 1972 when Rockefeller decided to run for president and get tough on crime and instituted in New York very draconian sentences. I didn't think the legislature would go along with it. I hope this group will focus on and say that this is data worth looking at and we should be looking at it in our community. What are we doing and why? The question should be data focused.

Jay Corzine – I totally agree with the general jist of your presentation. You were basically saying that if people were not arresting people for drugs there would be no drug arrests. In essence people are patrolling general neighborhoods but get a number of calls every night that says something to the effect that so and so is out on the corner selling drugs again. Numbers are generated by people making calls.
On the other hand, I completely agree with you about the legalization of marijuana. Thinking about the use of caffeine, alcohol, PCP, etc.

Presentation 2-

Michael Becker– do you have any data on if these individuals reoffended?

Dwayne – what else could we do with it? That is one of the directions we talked about. There is a continuing criminal record. I think we would be able to follow that. We now need to catch our breath and that is another step for moving forward.

Roland – does it make a difference for the number of people who died in prison or released? I think combined those two makes it fuzzy for the percentage.

Dwayne - if we were to focus on that population we would want to make that split, but we are just focused on a snapshot, but if we want to focus on that we want to separate it.

Chris Rasche – have you tracked this over time since 1977, have exonerations gone up from none in the 70s to much more frequently these days? Is that a product of changes in the justice system or the exoneration movement in the last decade?

Dwayne – well there are only 6, so it is hard to see a trend. But a couple of individuals have managed to have an advocacy system around them that might lead to exoneration. There are others on death row who might have an equally problematic case but have not had an advocacy group supported around them.

Becky Block – so you have thought about following this people over a longer period of time. Have you thought about following these peoples' longer life histories, you could either use survival analysis or criminal career type analysis and look at for example, death rates. How long it took

between the sentence and when they died, from whatever cause and compare that to the general population, age, sex and race?

Dwayne – well there is almost no sex difference.
Becky – or when they got out of prison they died too.
Dwayne – so follow them when they got out of prison
Becky – so the zero point would be prison, so died in prison or out of prison. Looking at Pam Lattimore did some really cool work on kids in the juvenile system in California and looking at their death rates. A lot of work on the death rates of people who have been brought into the criminal justice system. So that is what I am thinking of.
Dwayne – trying to figure out what happens post-release is an extreme task. Hadn't considered that due to the complexity of the task. But very interesting.
Dallas Drake – is there any sense about what led to the cases being overturned?

Dwayne – great question. Next step, a subset of this data and a co-author of this data wants to look at a content analysis of the legal issues and find out what led to the overturning of the cases. I think those are able to be coded.

Presentation 3 –
Aaron Poole – You've convinced me they are related. You kind of touched on this before on how our popular stories spread information and perceptions and ideas and sometimes misinformation in our society. I wanted your take on this. Do you think authors that take details from real life, do you think they have an ethical obligation in they way the present their information? If you are present ethnic minorities as the main bad guys characterizing serial killers in certain ways and things like that.

Vance – I guess I don't if they are writing fiction. Id o think that if you are writing a non-fiction novel that you should stick to the facts. Now most of these people are writing for money. The ethnic minorities, up to this time, it is interesting because Charlie Chan was the first positive role model, yet now in this day and age he is being criticized by his caricature of Charlie chan. In his books it was a very positive point he had. But I do think the one point you do make is the average American certainly has a view of murder far different than the reality. Roland says we should be concentrating on black on black murder as that is where the problem is, but you will not see a tv show on that.

Roland – at the Santa Monica meeting someone knew someone who wrote crime tv shows and they came and talked about it. When someone suggests that they were giving people ides, they just said that they pulled the stuff out of the air.

Dallas – in science fiction, a lot of it has successfully given ideas that have been active in society, so I am wondering it is the use of imagination toe create things that don't exist yet. I am wondering what the prospect of using these fiction novels for the future of crime fighting.

Vance – experience overseas in other countries. It does give some ideas. A lot of times police investigators learn what they are doing from tv, as lay people we find that hard to believe. For example, the DC Snipers, Chief Bull was doing what he learned on tv. He said not to stop black males because he learned that black males do not commit serial murder from a movie.

Dick Block – seems to me that different countries have different traditions what they write about murders. In England, who are the murderers? Almost always they are rich people, with mobility. Who commit most of the murders in England and mostly don't occur in Oxford or Cambridge. Seems to me that it is a counter tradition to the tradition that we have. We do not have the American country murder tradition that they do in England. When we have a murder mystery, maybe in the middle class, Charlie Chan usually was in the middle class or usually the archeologist. Different societies have different traditions on what they write novels about.

Vance – I think when Yamagachi and Kimbrell was accused and never brought to justice they said yes we have murders in Japan but we have never had a case where someone committed murders and chopped up the bodies and burned them. And I said well maybe you have been Americanized.

Claire Ferguson – do you think maybe it is the other way around? People taking inspiration from the media to commit real cases? The Andrea Yates thing kind of springs to mind.
Vance – I think that brings to mind how much newspapers should write to give people ideas on how to commit crimes. I think you are right.

Presentation 4 –
Dick Block – was there any history of privacy or privateering during the civil war?
Paul – yes, so far as I know no one was executed for it.

Panel Session 2: Serial and Mass Murder

Chair: Claire Ferguson – Recorder: Michael Becker

Addressing the Challenges and Limitations of Utilizing Data to Measure and Study Serial Homicide

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According to Beasley (2004), the study of serial murder should be objective, standardized and include as many subjects as possible. Although researchers have been collecting serial homicide data for decades, it was done disparately. Hinch and Hepburn (1998, p. 8) categorize past attempts as "dealing with narrowly defined acts and the most sensational cases." Lack of reliable data has contributed to the slowing of research on serial crime (Petee and Jarvis, 2000) and is identified as a key obstacle for the future (Dowden, 2005). Leyton (1996) and Skrapec (2001) have advised scholars to abandon egos, academic 'turf wars', and self-serving agendas in search of a greater understanding of the phenomenon. In an update on the 'Evolution of Serial Murder as a Social Phenomenon in American Society', Hickey (2014, p. 12) acutely summarizes the plight endured by those delving into this work, acknowledging that "being a researcher in this area has required getting past misinformation and sensationalism, finding others who share similar research interests, and dredging up reliable data."

Overcoming these barriers is an ongoing endeavor, undertaken by the efforts of those involved in Northeastern University's Atypical Homicide Research Group (2015) and the Serial Homicide Expertise and Information Sharing Collaborative (SHEISC), joint networks of a collective one-hundred twenty academic and law enforcement professionals with the goal of coming to a greater understanding of the serial murderer (Boyne, 2014). In 2015, after a combined total of thirty-seven years amassing data on serial homicide offenders, Michael Aamodt and Enzo Yaksic began recruiting the "next generation" of serial homicide data scientists to analyze the output in unique ways. Relationships were built with Clare Allely, author of *Neurodevelopmental and Psychosocial Risk Factors in Serial Killers and Mass Murderers* (2014), Ronald Hinch, author of *Researching Serial Murder: Methodological and Definitional Problems* (1998), authors Mikhail Simkin and Vwani Roychowdhury of *Stochastic Modeling of a Serial Killer* (2014), Marissa Harrison, author of *Female Serial Killers in the US: Means, Motives, and Makings (*2015*),* Virginia Beard, author of *Death-Related Crime: Applying Bryant's Conceptual Paradigm of Thanatological Crime to Serial Homicide* (2014), F. Jeane Gerard, author of *Offender profiles and Crime-scene Patterns in Belgian Sexual Murders (*2006*),* Jaydip Sarkar, author of *Mental Health Assessment of Rape Offenders* (2013), Elizabeth A. Gurian, author of *Reframing Serial Murder Within Empirical Research: Offending and Adjudication Patterns of Male, Female, and Partnered Serial Killers*. To encourage further empirical studies, Aamodt and Yaksic provided an opportunity to bolster future work in this arena and increase sample sizes by supplying each with the entire Radford/FGCU-SHEISC Serial Killer Database (Aamodt, 2014).

In the past, serial homicide databases were sparsely populated as academicians collecting information made it available only to their own research team (Ramsland, 2010). To protect self-interests, most operated in 'information silos', hoarding data and secreting source material. Procurement of these files now comes at exorbitant financial cost (Canter, 2011; Godwin, 2012) as records were often kept in paper format (Egger, 2014; Geberth, 2010) or within now defunct or corrupted computer systems (Waters, 2013). As a result, some materials no longer exist (Leyton, 2013). Byproducts of these actions led to the creation of different definitions, the use of assorted sources, the surveillance of non-comparative variables and the inability to validate information.

Multiple definitions have also come about due to the variance of emphasis on the nuances of serial murder (Morton and McNamara, 2005) leading criminologists to be restrictive in their interpretations of what constitutes a serial murderer (Ostrosky-Solis et al., 2008). Wright et al. (2009) state that much of the scholarly research has been hindered by the definition of each type of killer, which differ on requirements such as the number of murders, the types of motivations and the temporal aspect (Morton and Hilts, 2008). Starting from a more inclusive definition may hold advantages, according to Osborne and Salfati (2015), but, by excluding certain types of killers, analysts have reduced the pool of research subjects (Cluff et al., 1997). The Radford/FGCU-SHEISC Serial Killer Database (Aamodt, 2014) employs the broad two victim definition provided by the Federal Bureau of Investigation (FBI) as it encompasses the full array of serial murderers by not referencing underlying motivation, behavior or psychological characteristics (Brantley and Kosky, 2005; Hargrove, 2010). Radford data include financial, professional contract, revenge, gang, organized crime, robbery/homicide and witness elimination offenders among the more 'traditional' serial sexual murderers. Because of the hyperfocus on the serial sexual killer, research efforts have been damaged in recent years as the terms sexual homicide and serial murder have become synonymous (Petee and Jarvis, 2000).

To most, a significant aspect of the serial murderer's life must be dedicated to the process of killing serially with an emphasis placed on behaviors like predation, fantastical thinking, premeditation and rumination (Brantley and Kosky, 2005). As gang members and professional contract killers are thought not to engage in these activities, with their rationally motivated crimes (Jenkins, 2002) occurring alongside functional (Ferguson et al., 2003) violence, criminologists protest their classification as serial homicide offenders. If killing is a means of conflict resolution, endorsed by others, motivated strictly by financial gain, the byproduct of provocation or is committed out of convenience, revenge or survival, the offender is often deliberately excluded from serial homicide offender databases and research samples (Ferguson et al., 2003; Gorby 2000). These viewpoints reinforce the antiquated notion that offenders must utilize violence unconventionally to qualify as a serial murderer. Many, including the killers themselves (Valencia et al., 2013), believe that self-motivated serial murderers do not belong juxtaposed to 'hitmen' since they are paid to kill and do not choose their own targets (Hickey, 2013). Conversely, these murderers display the intent to kill anyone, at any time (Vronsky, 2013) and are seemingly gratified by appeasing their greed. Lester and White (2014), as well as agents of the FBI (Morton and McNamara, 2005), acknowledged that organized crime, contract

and drug/gang killings are serial murders that can be motivated by revenge, loyalty or profit. Daniels (2015) rightfully posits creating a new category of serial murderer that encompasses gang members.

Evident is the risk of diluting a sample and compromising the integrity of data by conflating various types of multiple murderers together (Giannangelo, 2013). However, excluding killers that cross between subcategories hinders the advancement of serial homicide research (Clemente, 2013). Hickey (2015) notes that broad definitions may not be meaningful, but excluding financial motives and those who kill acquaintances is based on speculation rather than on any empirical foundation. Aamodt and Yaksic's application of the Modified Delphi Technique (Custer et al., 1999) on an instituted panel of experts demonstrate a wide range of opinions on the topic (Aamodt and Yaksic, 2015a). Although these disagreements highlight the difficulty of maintaining collaborative relationships, the group posited that the broad categorical term "Multiple Event Murderer" could be used as a means to study the multitude of subsets of offenders either together or separately, defined henceforth as: Any person(s) that cause(s) the death of another through illegal means more than once in at least two locations. The benefit of cataloging multiple murderers using one overarching classification scheme is that it allows individual researchers to avoid the shortfalls of the existing definitions (Adjorlolo and Chan, 2014). Rather than engaging in the process of retrofitting offenders into categories to suit specific study parameters, whole subsets of offenders can be included or excluded from analysis, depending on the author's pre-defined criteria. Of course, the detriment of this approach arises when psychologically dissimilar populations are compared between studies (Aamodt and Yaksic, 2015a). Researchers must be cognizant that serial murderers cannot be fit into one single behavioral profile (Hickey, 2015) and, based upon the uniqueness and variances of human behavior, be aware of the limitations in typing (Morton and McNamara, 2005) and counting the serial murderer.

Addressing the seemingly straightforward task of tabulating the occurrence of these offenders leads to great debate. Any discussion of prevalence should first adequately account for the issue of surveillance bias where "the more you look, the more you find" (Haut and Pronovost, 2011). But, calculation of the incidence of the serial murderers' presence in society is complicated due, in part, to the overuse of descriptive statistics (Gurian, 2015) and the mechanism used to capture the information. For instance, Google's ubiquity has ensured that homicide researchers cull data from the search engine and rely on its Google Alerts results (Hoyer, 2015). At issue when collecting data on serial homicide activity is the algorithm's failure to "crawl" a news report about a given murder series (Hansen, 2015) or its neglect in returning results that do not match the search term exactly but are nevertheless similar and related (McLaughlin, 2015). If a murder series occurs in a small town whose newspaper has been shuttered (Hansen, 2015) it is likely that the event will remain unreported in the media and thusly not included in open-source databases (Parkin and Gruenewald, 2015). These oversights lead researchers to unwittingly overlook records, impacting future statistics and reporting.

Consideration was given to these limitations by the current author during each stage of data collection for recent editions of *Extreme Killing* (2011) and *Serial Murderers and Their*

Victims (2015). Since researchers supposedly have access to ever increasing sources of information, more than ever before, confronting the fallacy of abundant data troves was a necessary aspect of the collection strategy. Early in the meticulous process of tracking adjudicated serial murder series, year over year decreases in the number of apprehended serial murderers were detected, signaling a potential reduction in the total number of serial murderers. After careful analysis, Fox, Levin (2011) and Yaksic resolved that the serial homicide phenomenon is in decline (Beam, 2011; Fox and Levin, 2014).

In reporting the drop in serial murder activity (one that mimics the overall downturn in the national homicide rate) the current author endured criticism at the 2015 Homicide Research Working Group (HRWG) conference after failing to produce the rate per 100,000 persons of serial homicides in the United States (Chilton, 2015). This measurement was not presented by the current author because the nature of these offenses prevents traditional metrics from being applied when counting the number of serial murderers active within a given year. A serial offender's victims are typically spread across several years – even decades – while their activities are generally unknown or not fully revealed until their apprehension many years after their crimes. Scholars are therefore forced to aggregate this data by decade after selecting the midpoint of an offender's career and attributing them to the corresponding decade. Results are displayed in bar graphs rather than pivot tables (Fox and Levin, 2011; Hickey, 2015). Still, HRWG conference attendees insisted that the amount of unknown serial murderers operating within the 'dark figure of crime' outweighed known offenders. Although not identifying a margin, this argument was used to discount the evidenced abatement in serial homicide. One participant later admitted that these impressions were based on information received in the 1990s during a HRWG meeting held at the FBI Academy in Quantico, Virginia (Chilton, 2015). It should be acknowledged that the FBI's Behavioral Analysis Unit 2 does not, by their own admission, track solved or unsolved murders or maintain a list of serial murderers (Hilts, 2010). Quantitative statements made by FBI agents should be considered conjectured, results derived from an impregnable 'black box'. Representatives of the FBI's Violent Criminal Apprehension Program (ViCAP) have stated that a list of probable serial killings does not exist within the agency, that the existence of patterns is often speculated based on the random nature of homicides and that the onus to link murders together is, in the end, on the complaining agency (Harrigan, 2010). ViCAP agents cite the Highway Serial Killings Initiative as evidence that several hundred serial murderers remain unapprehended across the country (Harrigan, 2010) but refuse to provide actionable information to researchers to validate such claims. Another HRWG attendee was adamant that definitional differences were responsible for the finding that serial homicide is diminishing. A lack of a unified definition does hinder the accuracy of incidence and prevalence statistics (Gurian, 2015), but researchers have arrived at the same conclusion about the drop off in serial murders each while using a different victim threshold, ranging from two to four (Aamodt, 2014; Fox and Levin, 2011; Hickey, 2015).

It may seem counterintuitive to suggest a decline in serial homicide as strangers are invited into our lives in new and innovative ways in the age of Uber and Airbnb's sharing economy and given ever increasing access to our private information over Facebook's social networking platform. Perhaps this explains why the current author's reasoning behind the decrease

(Yaksic, 2013a) was initially met with trepidation. In the two years since this hypothesis was put forth, several of the current author's proposed theses have been accepted (Fox and Levin, 2014; Hickey, 2015) as probable explanations for the downward trend.

It is presumed that advances in technology have made it easier for law enforcement to consider that a serial murderer may be operating in their area (Kaste, 2015). Jurisdictional conflicts have subsided in favor of increased collaboration with the FBI (Harrigan, 2010) and surrounding departments while the public is consulted for assistance (Backus, 2015a) more frequently. Cell phones, always connected social media accounts and the dawn of the surveillance age add other measures of risk to an offender's decision to victimize others. The Internet provides would-be offenders the opportunity to placate themselves without exploiting unwilling participants. Greater utilization of the underground sex trade and the likelihood of offenders warehousing abductees contribute to a decreased need to eliminate complaining witnesses with such regularity as some serial offenders have expressed attaining little to no enjoyment from taking a life (Reavis, 2011). Efforts to educate law enforcement and the public about these offenders led to increased awareness of serial homicide offender hallmarks (Wall and Johnson, 2015) and that odd behaviors, stalking offenses, paraphilias and violent tendencies toward animals or others in youth are part of a larger group of warning signs. A greater distrust of strangers led to the abolishment of hitchhiking and parents reluctant to allow children to play freely without supervision (Aamodt and Surrette, 2013), diminishing potential victim pools. Harsher punishments and less use of parole ensures that would-be serial murderers are incarcerated for longer. Serial murder is not viewed as the shortcut to celebrity status it once was since news coverage of these events has lessened over the years. Many would-be serial murderers are captured after their first murder due to incompetence, before they have the opportunity to amass larger victim counts (Aamodt and Yaksic, 2015b). Future generations may witness an even greater decrease in victimization as long haul truckers are replaced by automated vehicles (Davies, 2015). The decline in serial homicide calls into question the image of the infallible, successful killer these offenders were once thought to be. Societies' past ignorance of their means and motives allowed serial murderers freedoms they can no longer enjoy. While the desire to become a serial murderer has not dissipated among offenders (Aamodt and Yaksic, 2015b), these factors may have permanently displaced some offenders, forced others into altering their modus operandi or into early retirement.

Others may have begun adopting tactics commonly associated with the spree murderer (Aamodt and Yaksic, 2015b). Long after Muhammad and Malvo (Koerner, 2002), the debate about how to typify spree murderers continues due to those that carry out their crimes in 'spree-like' frequency but, as agents of the FBI have stated (Morton and Hilts, 2008), with the motives and tactics of a serial murderer (Earl, 2013). Researchers have been reluctant to juxtapose these offenders or admit witnessing the convergence of the spree and serial murderer in recent years. It is disputable that spree and serial murderers should continue to be stratified separately since the 'cooling off period', used to make distinctions between potentially similar serial offenders, is now characterized as a historical artifact (Douglas et al., 2013). Osborn and Salfati (2015) concluded that spree and serial homicide may not be distinguishable, including in their data eight instances of one day time intervals and one series that lasted only three days.

Nearly a decade ago, Salfati et al. (2006) concluded the only study comparing serial and spree murderers, finding that spree offenders were generally 29 years old, killed on average six victims with firearms, most often in one day at anywhere from two to six locations. Seventy-three percent of these perpetrators were killed before capture. Aamodt and Yaksic (2015b) found that spree offenders in their data were also typically 29 years old, but killed on average three victims with firearms most often over a one week period at three locations. The majority of offenders in the Aamodt and Yaksic (2015b) inquiry were arrested rather than being killed in police shootouts after embarking on a suicide mission. Although spree offenders did share similarities with serial murderers, it is not yet known which psychological traits are mutual or if patterns in precipitating factors can be established. Aamodt and Yaksic (2015b) concur with Salfati et al. (2006) that more data is needed to determine if spree and serial murderers should continue to be stratified separately. The recent case of Todd Kenyan West is an example of an offender that might fit into both serial and spree classification schemes (Bresswein, 2015). These types of spree/serial hybrid cases are occurring in the data with greater frequency and could be indicative of future trends.

It should be noted that giving consideration to new offender groups will inevitably impact and change the data. After incorporating spree murderers and instances of urban violence into their serial homicide dataset, Hickey (2015) and Yaksic found evidence of a change in victimization rates. Fewer cases of only female victims are co-occurring with an increase in males being targeted. Fewer strangers and more family members are killed with a slight drop in the number of prostitutes being singled out. There are fewer numbers of victims per offender and fewer cases involving more than one state. Fewer cases of strangulation are recorded alongside more cases involving shooting as the sole method of killing.

Still, Homant and Kennedy (2014) stipulate that a serial murderer's subsequent killings should be part of a separate sequence of behaviors. Those committed by spree murderers are said to be part of one continuous event, often the byproduct of situational violence (Daniels, 2015). Not only is the sequence distinction less useful if these offenders are viewed as Multiple-Event Murderers (Aamodt and Yaksic, 2015a), but serial murderers can and have been fueled by similar precipitating incidents.

Although Beasley (2004) noted feelings of restlessness and impulsivity among serial murderers, they have been characterized as cold and calculating methodical planners that commit unprovoked, patterned and predatory sexual attacks on strangers. Spree killers are typed as temperamental, impulsive and bombastic with initial murders being haphazard retaliatory reactions directed at acquaintances (Salfati, 2006) whose subsequent murders often help them obtain necessities (Daniels, 2015). Perhaps, however, there are circumstances and environmental factors that may preclude multiple murderers from acting in the manner that they would ideally choose. Some offenders are given the luxury of time between offenses, not because of superior knowledge, talent or skill, but due to variables beyond their control including the degree of witness involvement, varying levels of police pressure and even luck. If a spree-type offender eludes police, they may bide their time, reenter society, and possibly continue killing again in the future, unabated. Similarly, serial murderers can exhibit 'run and gun' behaviors by the end of their series (Smith, 2009; Sparacello, 2011). By ignoring the

stratification question, researchers overlook the evolving nature of serial homicide and disregard how serial murderers are molded by social conditions, cultural changes and external pressures (Warf and Wardell, 2002).

Early qualitative research efforts were ambitiously spearheaded by agents of the FBI who conferenced with twenty-five serial murderers in the early 1980s in an attempt to understand the circumstances behind their existence by immersing themselves in their life histories (Ressler and Burgess, 1985; Beasley, 2004). Since then, researchers have instituted lore by either intentionally or unwittingly overemphasizing anecdotes gathered from these interviews. Stereotypes emerged over the past forty years, forming due to the scarcity of systematic studies (Arndt et al., 2004; Jenkins, 1994), the desire to monetize the concept and the tendency for some to consciously invest in catering to those that actively embrace the more gruesome aspects of serial murderers and their deeds (Yaksic, 2014a). As such, some researchers have spent the greater part of the last decade combating antiquated viewpoints and dismantling myths from past eras (Fox and Levin, 1999; Sterbenz, 2015; Yaksic, 2013b). Consequently, there were very few comparative studies, virtually no biopsychosocial studies, an absence of more sophisticated statistical analysis and a repetitive use of small, nonrandom samples using retrospective data at the beginning of the millennium (Meloy, 2000).

Dowden (2005) suggests that researchers refocus their efforts as inquiries made by those working outside the field of serial homicide research are often the most potent. More established researchers, often capable of influencing the future direction of a field, regurgitate dated information as they are hesitant to relinquish the timeworn notions that aided in their attainment of ‘expert’ status. Others view their own contributions to serial homicide research as extraneous to their primary research aims or occupation. Their over-commitment to projects or assignments diminishes the relevancy of findings due to extended time lapses between communications. Some are motivated to increase their share of media presence, investing heavily in artificially boosting their standing by hiring public relations firms to aid in their quest of attaining publicity (Yaksic, 2014a). Serial homicide researchers are also subject to fatigue from overexposure to the phenomenon. Burnout could contribute to an attitude of complacency and acceptance of the current ‘state of the art’, regardless of the researcher’s grasp of a statement’s validity. A full analysis of the behaviors of the scholars providing society with a view of the serial murderer is due in Peter Vronsky’s upcoming 'Serial Killer Chronicles: A New History of Serial Murder Today' (2016).

It cannot be argued that serial murder has been transformed into a profitable construct, often exploited to satisfy our curiosity (McNamara and Morton, 2004; Beasley 2004). Falsehoods are often promulgated by unqualified individuals – self-ascribed forensic criminologists – due to the ease with which information can now be generated and disseminated for financial incentives (Yaksic, 2014a). There are those that imprudently wield criminal profiling as a weapon in a game of good versus evil where the good guys battle and triumph over the bad guys (Mains, 2015a). This infantile worldview may produce good entertainment and steady paychecks (Mains, 2015b) but also inevitably induces a false sense of knowing these offenders. As such, serial murderers have been portrayed as prolific evil geniuses, inhuman psychopathic monsters and dysfunctional white male loners, unusual in appearance and incapable of

maintaining long term relationships. They are called cunning predators that ceaselessly hunt dozens of strangers to fulfill a desire for bloodlust. They supposedly possess the ability to not only evade the police but expertly engage them through the media and frequent their hangouts to learn about cases, all while yearning to be caught.

Leading research shows that serial murderers do not consistently behave this way (Fox and Levin, 1999; Hickey, 2015). The current author has imparted findings on the issue of race and the serial murderer, contentiously stating that every other serial murderer since 1995 has been African American (Yaksic, 2006). Others (Hickey, 2015) have since validated this proposal, finding that it has held true almost a decade after being posited. Aamodt (2008) found that the commonly held demographic profile correctly matches only eighteen percent of serial murderers. As Beasley (2004) notes, the prevailing thought that serial murderers sadistically kill for sexual gratification, engage in animal torture, are physically or sexually abused as children, become more evidence conscious over time and allow media coverage to alter their criminal intentions must be challenged. Results from Bateman and Salfati (2007) indicate that serial murderers are not consistently performing the same crime scene behaviors throughout their series. Coupled with the findings of Schlesinger et al. (2010), these revelations test the notions that serial murderers consistently take souvenirs or leave signatures, escalate in their violence as they continue killing, improve their methods and change their strategies over their careers. Violent acts performed on a body also should not automatically signal the presence of a serial murderer.

Serial murder is thought to be an affliction that overtakes an offender's life but they are not hostages to this cycle; they can control their desire to kill. Offenders are not always in prison, the military, at college, or in a mental health facility during time intervals (Morton et al., 2015) and rarely begin to unravel at the end of their series. Many have criminal records that reflect histories mired in anti-social behavior but some do display remorse (Yaksic, 2012) and can be affected by what they do (Levin and Fox, 2008), sometimes coping with their actions by abusing substances. Murders can be committed serially due to subtle factors such as the offender's perception that a victim lied, cheated, insulted, or hurried them (Quinet, 2011). Victims are often selected not as substitution for someone they know but based on availability, vulnerability, and desirability (Morton et al., 2015). It is also obsolete to classify serial murderers as either organized or disorganized as this investigational dichotomy has not been used in practice during much of the past decade (Morton et al., 2015).

Abiding by tropes can influence the course of serial homicide investigations. A private investigator from Sarasota, Florida used only the physical attributes of eighteen potential victims to connect the disappearances simply because they "look just like sisters", drawing a comparison to the archaic archetype of Ted Bundy (Gleiter, 2014). Although firearms are the highest proportion of kill method in the Radford data (Aamodt, 2014), an investigator characterized a recently apprehended serial murderer's use of a firearm in each of four homicides as "rare" (Alexander, 2014). Most still consider as fact the old adage that serial murderers desire a 'hands-on' kill and must strangle their victims to feel the life leave their bodies.

To avoid further pitfalls, Beasley (2004) recommends supplementing interviews, like those conducted by Pino (2005) and Reavis (2011), with information from large scale databases in order to obtain a more informed view of the serial murderer. 'Big Data' provides many benefits to almost all sectors of society (Davenport, TH., and Dyché, J., 2013; Venton, 2015) but has yet to be utilized to effect this microcosm of the criminal justice system. While researchers have now officially convened in an effort to attain this aim (Boyne, 2014), several limitations have been encountered.

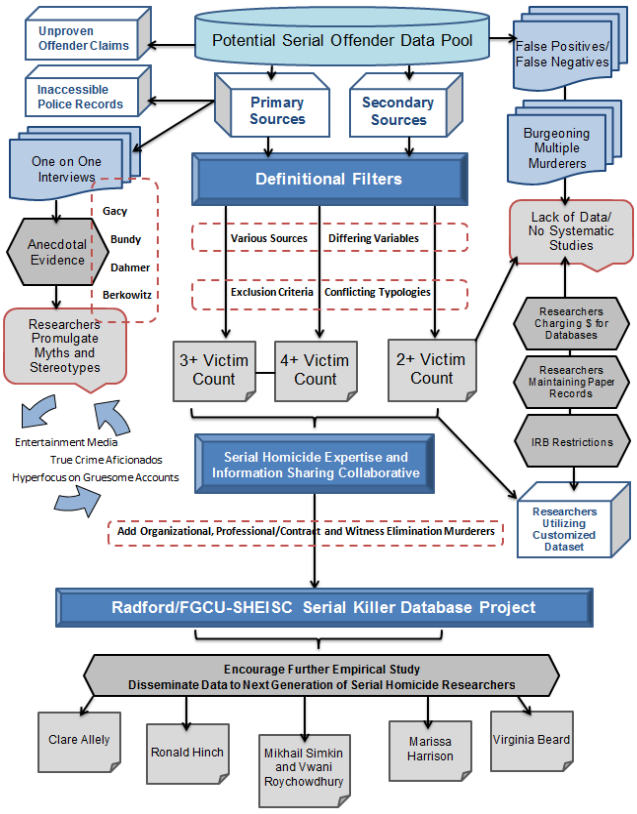

Figure 1. Current Serial Homicide Data Collection

All facets of serial homicide research are fraught with quantification issues due to the use of outmoded data collection methods. No official mechanism exists for capturing instances of serial homicide as the FBI's Uniform Crime Report (UCR) and Supplementary Homicide Report (SHR) lack a specific entry field. Researchers inclined to count the frequency of events and make determinations about their instance in society cannot track serial homicide easily as there is a great amount of disagreement as to what exactly constitutes a serial murder series. Categorization efforts have been ongoing since the inception of this phenomenon but researchers are no closer to consensus (Ostrosky-Solis et al., 2008) on classification today than they were forty years ago. Attempting to include motive into the definition of serial murder results in some degree of subjectivity (Ferguson et al., 2003) as it must be inferred from observable behavior (Kraemer et al., 2004) and depends on history, context and expectation; constructs that are not only impossible to quantify but unique to each individual. The news media oftentimes does a poor job of accurately labeling a serial offender based on motive, as evident in the recent trials of Aaron Hernandez (Jones, 2014) and Dzhokhar Tsarnaev (Zalkind, 2014). Those regularly deemed spree killers can also erroneously be given the serial killer designation (Winton et al., 2014). For these reasons, the addition of serial homicide offender records to databases can be an unnecessarily subjective process. Figure 1 illustrates the current data collection environment, one that could be characterized as chaotic.

The emotional 'cooling off period' is a confounding concept that has been used to differentiate between multiple murderers. While experts disagree on a standard 'cooling off' length, many continue to utilize this temporal element as part of their exclusion criteria. Osborne and Salfati (2015) note that there is a lack of research to develop an understanding of 'cooling off' and that it should be discarded and re-conceptualized into time intervals. Since these intervals could be

less than one day, the continued use of the temporal distinction has restricted the utility of the current serial murder definition (Adjorlolo and Chan, 2014). Although serial murderers may return to their usual way of life in the time breaks between homicides, researchers have little understanding of the behaviors that they partake in during these interruptions. It is impossible to discern the degree to which serial murderers remain entrenched in their killing lifestyle. While it may appear that they are taking care of their children or going to the store, they may actually be dedicating effort to planning future crimes, ruminating about past ones or managing the impression made on others (Levin and Fox, 2008). An offender's dormant period is thought to be psychologically beneficial to them but implies that they engage in violence as part of a stress-relief regimen to resolve a buildup of internal conflict (Corzine, 2014). This viewpoint wrongfully insinuates that serial murder is driven only by aggression and agitation and that offenders work themselves into a frenzy, or 'heat up' before each kill (McClellan, 2014). This outlook, as well as the use of the word 'emotional' to describe this period (Aamodt and Yaksic 2015b), conflicts with the perspective that serial murder is a predatory crime whose offenders are well-controlled, cold and calculating (Myers, 2014).

Unlike in other fields of inquiry, attempts to collect primary source information are hampered by extraneous factors. Researchers must contend with limited access to subjects due to their incarceration, death or refusal to participate in research studies. When access to subjects is granted, offenders often alter their version of events to better suit their needs or cannot accurately recall how events transpired. Although some serial murderers are consumed by their killing lifestyle (Fox and Levin, 2011), most often lack enough insight into themselves to provide useful and actionable information. Since opportunities for interviews are sparse, statements given by murderers are overblown, generalized and given more weight than they deserve. Building rapport with a subject can be a time consuming process, often lasting months or even years. Regardless, primary source interviews (Pino, 2005; Reavis, 2011) should supplement the information culled from secondary sources so that offenders' actions are not minimized after being reduced to mere data points in an Excel worksheet. Sorting offenders by only demographic variables can lead to a loss of narrative and historical components and an overreliance on selected anecdata.

Available data can also be rather difficult to aggregate and collate. Titlow (2014) cataloged some of the hardships the current author encountered during the process of data transformation while merging each of the databases received through the SHEISC initiative. Although a more real-time, 'root cause analysis' of offenders' methods and motivations would greatly enhance law enforcement's response to these matters, gathering primary source information on each of the 3,949 serial homicide offenders listed in the Radford/FGCU-SHEISC Serial Killer Database (Aamodt, 2014) would take more than a lifetime, even if they were universally available. While potentially able to amass far larger victim counts than their American counterparts, international killers are woefully understudied due to substandard record keeping and unestablished judicial systems in foreign countries as well as cultures that do not obsess about the criminal mind.

Linking and attributing homicides to one killer can be a challenging process, spanning many years and encompassing the efforts of hundreds of individuals (LePard, 2015; Lohr, 2015).

Taskforces are charged with identifying the perpetrator after a large expanse of time since the initial murder occurred (Backus, 2015b). The length of legal proceedings contributes to the dearth of primary source research materials, such as an offender's journal, as these items are warehoused in evidence lockers and not revealed until a trial (Zapotosky, 2015). As is the case with serial murder suspects Lonnie Franklin (Gerber, 2015) and Felix Vail (Yaksic, 2014b), bringing offenders to trial can take half a decade. Due to the threat of lawsuits from individuals that are wrongly labeled with the 'serial killer' tag, researchers often wait until their conviction to add them to datasets. This artificial lag greatly diminishes an offender's impact on the data because researchers customarily generate statistical output based on the data that becomes available during the new edition cycle of their academic textbooks. Excluded from analysis would be those offenders discovered during the resolution of a cold case (Hoffer, 2015), for example, since they occurred outside of the parameters of the author's timeframe. The drawback of such a stringent focus on cases surrounding the textbook's publication period is the inability to conduct any type of systematic comparison of offenders from previous eras to these more recent killers.

Complicating matters are those individuals that have no involvement in a series of murders but claim responsibility for them (Kolker, 2010) and those that boast about murders beyond the scope of their series. Each scenario makes adjudicating these crimes difficult. Still, others refuse to accept responsibility for the totality of the killings they did cause. Some individuals listed in The Innocence Project (Scheck and Neufeld, 2015) and The National Registry of Exonerations (2015) were released after the true perpetrator was revealed to be a serial murderer (Coker, 2015). Over the years, a few series were even determined to likely be nonexistent – the Smiley Face killings of college aged men in the Midwest and Northeast (Drake et al., 2010), the canal 'Pusher' case in Manchester, England (Slater, 2015) and the Phantom of Heilbronn, supposedly operating in Austria, France and Germany from 1993 to 2009 (Himmelreich, 2009).

Due to Institutional Review Board restrictions and confidentiality agreements (Salfati, 2011), the most detailed records of the crime, those of law enforcement, usually are not available to researchers (Kraemer et al., 2004). Also routinely out of reach is comprehensive documentation related to a case, including investigative, autopsy, forensic and evidence analysis reports; crime scene and autopsy photographs, diagrams, sketches, and maps; victimology information; offender background; and any confessions or admissions by the offender (Beasley, 2004). Even if available, these documents cannot account for missed offenses that the offender committed that are unknown to police (Osborne and Salfati, 2015). Information gleaned from law enforcement sources is also processed through several layers of individuals before it ends up as a data point in a database and is therefore exposed to all the biases and distortions that accompany human interpretation of facts. These records can contain misinformation as investigators' levels of experience with and understanding of such offenses may vary widely (Morton and McNamara, 2005), leading them to only record information fitting their notions of what will be important for the investigation (Bateman and Salfati, 2007). An unavoidable limitation of all serial homicide datasets is that what is not known about victims cannot be known (Quinet, 2011) as they are the primary, and perhaps the sole, witness.

Due to the outcome of the crime, he or she is no longer able to provide the necessary evidence (Bateman and Salfati, 2007).

Because of these reasons, most researchers are forced to collect information from secondary sources, such as true crime books and news media reports (Morton and McNamara, 2005). Reliance on this approach is problematic because the veracity of claims made in true crime books are unverifiable and media reports often contain varying degrees of information pertinent to investigating this phenomenon (Morton and McNamara, 2005), which oftentimes contributes to missing data (Bateman and Salfati, 2007). For example, universally incorporating offenders that commit two homicides is arduous since news outlets infrequently refer to these offenders as serial murderers. Instead, these offenders are muddled with double-murderers (Hoffer, 2015), killers whose two homicides occur in the same incident, at the same time. This oversight has led to several records being overlooked during searches.

It is important to point out that the most popular media report truncator, Google News, was created merely a decade ago and has been shown to miss cases (Hansen, 2015). Using Google News in tandem with gathering incident report data directly from law enforcement sources is recommended but most likely implausible considering that, even after offering an Automated Case Matching algorithm (Harrigan, 2010), ViCAP cannot convince law enforcement to submit more than 0.5 percent of cases dealing with violent crimes to their information warehouse (Miller, 2015). If police departments do not prioritize case submission to investigate potential linkages, it is inconceivable that they will expend or dedicate effort to providing researchers with data.

While estimating the true prevalence of serial homicide is impossible due to the complex nature of available data, other factors can also complicate matters. The serial murder entertainment industry contributes to superfluous content that overtakes search results, leading to an oversampling of the most bizarre cases at the expense of more mundane and more common offenders (Beasley, 2004). Television shows focused on serial killers – Luther, Hannibal, Bates Motel, The Following, True Detective, The Fall, Dexter – are often given priority coverage in the media. As a result of this pollution, reports of real world cases are pushed further down the news cycle, sometimes into obscurity.

Researchers do not factor unsolved homicides into their analysis since these victims cannot be definitely attributed to the actions of serial murderers. Unapprehended serial murderers are certainly hidden within the nations numerous DNA backlogs (Nelson, 2010), making it unethical to produce an estimate that would adequately capture the serial murderer's true occurrence in society. Burgeoning serial murderers, those that maintain intent to commit a subsequent offense after being apprehended for their first homicide, are not included in databases since no academic study has been dedicated to this offender population of 'near misses', i.e. Neal Falls (Wall and Johnson, 2015). Some 'near misses' may be contained in the dataset used by Pakkanen et al. (2015) as it was found that the one-off offenders in their sample committed sexual acts during homicides and targeted strangers with greater frequency than the serial offenders. Using instances of aggravated assaults – in place of completed bad acts – as a means of predicting future dangerousness is problematic as researchers cannot

ethically assume that an incomplete series of events will transpire or culminate in a particular way. The instance of false positives, those that express the desire to kill serially but are not responsible for any homicides, is also unknown.

In contrast to this dismal outlook, researchers can begin conducting work in new ways to excel beyond the constraints provided herein. Gurian (2015) urges researchers to use inferential statistics to test hypotheses and estimate the entire serial murderer population, known and unknown. Although it is thought to be an unintelligible mess providing too few incentives to encourage scientists to utilize it as a resource (Newman, 2015), open-source data can contain a wealth of information and remains grossly underutilized. When data is readily available, Parkin and Gruenewald (2015) found that weaknesses with open-source data are no worse than in official data and information can be better, depending on the variable.

But, if a recent series titled 'The Seventies: The decade's worst killers' (Bergeron, 2015) is any indication, professional interest in investigating the serial murderer has dissipated greatly over the years, as attention is paid to other more contemporary forms of violence such as terrorist attacks and mass murders (Wilber, 2014). Since research dollars are often allocated to societal problems based on perceived impact, investment in new discoveries will undoubtedly wane if not cease altogether. A development such as this would be unfortunate because much is left to learn about these offenders. For instance, as Miller (2015) notes, rapists are far more likely than killers to be serial offenders, but what remains uncertain is the exact mechanism triggered within a serial rapist that, save for law enforcement intervention, begins their transition into a serial murderer. Or, stated as a question, how many potential 'serial murderers in waiting' are due to begin these transformations within the next decade?

An interdisciplinary team of researchers, journalists and data scientists have been assembled in an effort to revitalize efforts and address the limitations outlined in this report (Boyne, 2014). To overcome these barriers, we must begin to adapt processes proven useful in other industries. Virtual breakthrough series collaboratives (Zubkoff, 2014), encouraging the free exchange of ideas and network building, inspired the creation of the SHEISC in 2010 which resulted in the capture of serial murder suspect Felix Vail (Yaksic, 2014b). IBM's Watson supercomputer is primed for use in the criminal justice system (Wyllie, 2011) but its potential impact on serial homicide research and investigations is unknown at this time.

Digital information dashboards, data displays and electronic surveillance tools are used in healthcare systems to track performance on key indicators, allowing for 'drill down' capabilities to reveal information hidden amongst lower level data (Chen et al., 2014). Figure 2 depicts an example of how these displays would serve serial homicide research and, in turn, the criminal justice system as a whole. By subsuming data from various sources into one location, the data display would provide a semi real-time overview of probable serial murder activity while compiling data for scientists to analyze.

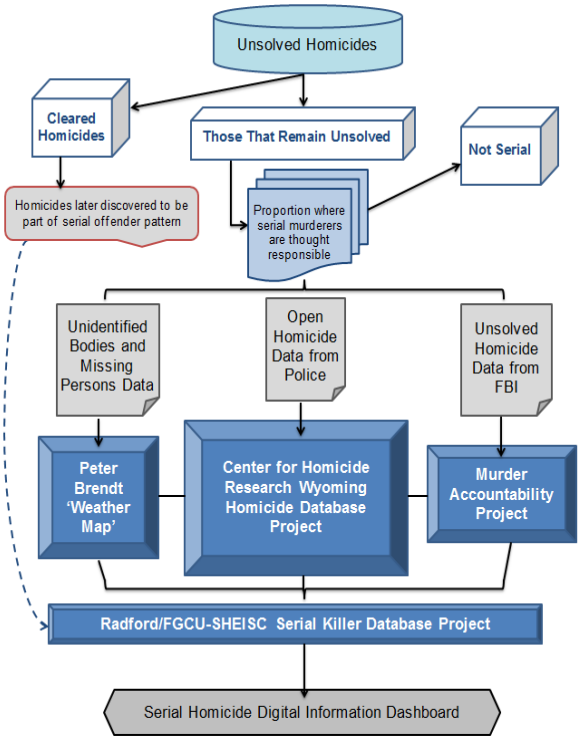

Figure 2. Proposed 'Serial Homicide Digital Information Dashboard'

After completing work applying an algorithm on unsolved homicide cases using the statistical technique of cluster analysis (Hargrove et al., 2011), Thomas Hargrove founded the Murder Accountability Project (Hargrove, 2015) to ensure that police increase their reporting of homicide occurrences to the FBI using the UCR and SHR mechanisms. Dallas Drake of the Center for Homicide Research has begun work on the Wyoming Homicide Database Project (Drake, 2015), a pilot to test the feasibility of obtaining information on solved homicides directly from law enforcement institutions. Data scientist Peter Brendt is at work applying natural language processing techniques to large swaths of data in an effort to generate a type of 'weather map' detailing probable serial murder activity among listings of unidentified bodies and missing persons (Brendt, 2015). Aamodt and Yaksic continue to populate the Radford/FGCU-SHEISC Serial Killer Database (Aamodt, 2014) with new cases.

Relationships should be fostered with local law enforcement crime analysts, statewide fusion centers and the FBI's Behavioral Threat Assessment Center (AP, 2013) under a joint understanding that utilizing data to address the longstanding criminal justice issue of multiple murder is of critical importance. Linking these efforts together under one umbrella to populate the 'Serial Homicide Digital Information Dashboard' may have distinct advantages, as yet both unexplored and unexploited.

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Neurodevelopmental and Psychosocial Risk Factors in Serial Killers and Mass Murderers

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Abstract

Multiple and serial murders are rare events that have a profound societal impact. We have conducted a systematic review, following PRISMA guidelines, of both the peer reviewed literature and of journalistic and legal sources regarding mass and serial killings. Our findings tentatively indicate that these extreme forms of violence may be a result of a highly complex interaction of biological, psychological and sociological factors and that, potentially, a significant proportion of mass or serial killers may have had neurodevelopmental disorders or head injury. Research into multiple and serial murder is in its infancy: there is a lack of rigorous studies and most of the literature is anecdotal and speculative. Specific future study of the potential role of neurodevelopmental disorders in multiple and serial murder is warranted and, due to the rarity of these events, innovative research techniques may be required. Future directions to investigate the psychiatric and psychosocial antecedents of serial murderers using a big data approach will also be covered.

Introduction

Serial homicide and mass and spree murder are criminal acts that are paradoxically one of the most significantly investigated while at the same time being some of the most misunderstood criminal acts. Serial murder is a source of social fascination and concern. However, it is very challenging to study because of a number of issues including the number of definitions used; the rarity of such events; the difficulties in identification of cases of serial murder and difficulties in collecting systematic data. However, the etiology of serial murder is important for informing possible intervention strategies and alleviating public concern. Numerous peer reviewed articles (e.g., Kraemer, 2004; Schlesinger, 2010) highlight that the strong interest and the relative lack of empirical study has created a situation whereby researchers are simultaneously actively engaged in this area but have been held back over the last few decades.

In attempting to investigate and identify the antecedents of serial murderers, the overall aim of this proposal is to address a longstanding area of concern among the criminological community. Despite the wealth of anecdotal evidence available in the public sphere, little is empirically known about the

origins of these offenders. There is a clear need for this research given the persistent myths and stereotypes surrounding multiple murder. The proposed project would provide insight into the various types of multiple-event killers and also the contributing factors which lead to their violent behaviour. The outcomes of the proposed research would be relevant for a variety of individuals, including clinicians, legal practitioners, law enforcement, and academic researchers.

A previous project, on which I was lead author, involved a systematic review, following PRISMA guidelines, of both the peer reviewed literature and of journalistic and legal sources regarding the neurodevelopmental and psychosocial stressors of multiple murderers. Silva, Leong, and Ferrari (2004) suggest the presence of an association between autism spectrum disorder (ASD) and serial homicidal behavior which has also been suggested by others (e.g., Fitzgerald, 2001). This has led us to explore the phenomenon of multiple event (i.e., serial, spree) and mass killings in relation to these risk factors in a unique systematic review of the literature. To examine ASD as a risk factor is particularly timely given the recent shooting cases of Adam Lanza, James Holmes, and Anders Brievik, all of whom have been considered to have autistic features (http://www.zerohedge.com/news/2012-12-15/newtown-shooter-had-asperger-syndrome-and-some-us-gun-facts; http://www.dailymail.co.uk/news/article-2156530/Anders-Behring-Breivik-rare-forms-Aspergers-Tourette-s-syndromes-says-Norways-leading-psychiatrist.html). Fitzgerald (2010) has suggested that Autistic Psychopathy may underlie the motivation of some of these mass killers. He suggests a new diagnosis, Criminal Autistic Psychopathy, a subcategory of Asperger's syndrome. In addition to ASD, we also explored head injury as it has been shown that this is more prevalent in serial killers, with one study suggesting that one in four serial killers had suffered either a head injury or (more rarely) a condition affecting the brain, such as meningitis, during their early years (Stone, 2009). However, this has rarely been investigated in the peer reviewed literature and it was typically only explored using samples of single homicide cases. Certainly the combined effects of psychosocial stressors, head injury, and ASD have never previously been examined in a systematic review. Our findings tentatively indicate that these extreme forms of violence may be a result of a highly complex interaction of biological, psychological and sociological factors and that, potentially, a significant proportion of mass or serial killers may have had neurodevelopmental disorders such as autism spectrum disorder or head injury (Allely et al., 2014). This present project will take these preliminary findings further by empirically examining a large sample of 3,949 serial killers from the Radford/FGCU Serial Killer Database. In addition, the study will examine a wide range of psychiatric conditions and disorders.

Further investigation such as the one proposed is important and Skrapec (2001) points out that there remains significant misinformation about serial homicide as a result of a number of failures of researchers to conduct studies with strong methodology. Instead, the majority of studies are based on small sample sizes and the data are acquired from secondary media sources. Research exploring serial homicide needs to be both objective and standardised and be conducted with academic rigour (Beasley, 2004). The lack of reliable data has contributed to the slowing of research on serial crime (Petee & Jarvis, 2000) and this “lack of data access” needs to be addressed to advance our understanding (Dowden, 2005). Obtaining substantial data on serial murderers comes with many challenges (Wright & Hensley, 2003). Relatively few researchers/academics are given access to investigative case material in order to conduct broad based, empirical studies (McNamara & Morton, 2005). This leads to the development of theories which are predominantly derived from a limited amount of case studies, literature review and mass media information (McNamara & Morton, 2004).

Rationale

The issue of a scarcity of systematic studies means that existing information is probably unreliable (Arndt, 2004) which subsequently leads to representations of serial homicide largely based on misinformation or myth (Jenkins, 1994; Hickey 2013b). Kraemer (2004) emphasises to researchers that empirically based analyses are both possible and necessary in order to address the limitations of the research on serial homicide to date (Culhane et al., 2011). Skrapec's work (2001) highlights that there is a need to renew our commitment to empiricism in the current respective approaches to the research of serial homicide which will take us a step further towards being able to more accurately describe and ultimately understand this extremely violent behaviour. This project primarily seeks to investigate and establish the psychiatric and psychosocial antecedents of serial and mass murderers. However, similar to Keppel and Weis' (2004) paper outlining the rarity of unusual body dispositions (the staging and posing of victims' bodies), these cases are ones which the majority of investigators will not encounter, leaving those who do with little investigative experience or knowledge to utilise. This emphasises the importance of research into even rare crimes in order to equip any investigator who encounters these crimes with as much information as possible. This will help the investigator with identification, reduce or eliminate "linkage blindness" and provide other crucial information which may impact positively on the investigative process and its direction (Farrell, Keppel, & Titterington, 2013). Linkage blindness is the almost total lack of sharing or coordinating of investigative information and insufficient networking by law enforcement agencies which allows serial homicide cases which cross jurisdictions to go unrelated. Another strong argument for studying 'rare' crimes is that they may provide particularly strong tests of prevailing theories. Serial homicide is of significant interest to behavioural sciences and mental health fields. Furthering our understanding of this phenomenon could lead to the development of prevention or protective interventions (Bowers, Holmes, & Rhom, 2010).

In sum, this research is required to investigate serial and mass murderers in much more detail (Culhane et al., 2011). There has been very little focus on investigating the contributing factors to serial homicide cases (Wright and Hensley, 2003). This project will be carried out using a dataset including 3,949 serial killers (which, to our knowledge, is the only one of its kind) to identify the antecedents of multiple murder. It will also explore what data we have and assess opportunities for and results of additional electronic searches for additional case information in order to enhance the quality of the data.

Main Aims/Research Questions

The main aims of the research are to investigate and establish the antecedents (i.e., psychiatric and psychosocial stressors) of serial murder as this may be the only way that we will eventually be able to confidently determine the prevalence, etiological factors, and psychosocial stressors associated with serial murder as well as other violent crime (all this data will be compared against the general population using published prevalence figures). This will be addressed by investigating the following research questions:

1. How can we assess the quality of data in the database and explore the availability of publicly available and accessible data to enhance the database?
2. What are the antecedents (e.g., clinical diagnosis, psychosocial stressors, brain injury) of serial murderers?

3. What are the differences, if any, in antecedents (as above) between the different types of multiple-event murder (e.g., spree and serial murder) and also sexually motivated serial homicide versus non-sexually motivated serial homicide?

Methodology

Even to date, there are debates around the possible predisposing and precipitating factors, which underlie serial homicide. Elucidating the mechanisms of extreme violence is of significant importance as such understanding may lead to preventative strategies. This is exactly what we will be aiming for with this empirical investigation which will develop a clearer understanding of the antecedents of serial killing and mass murder. Quinet (2007) suggest that there may be as many as 1,832 uncounted serial murder deaths annually in the US (Quinet, 2007). Additionally, Kiger (1990) suggested that the most extreme estimates of the number of serial murder victims are as high as 6,000 victims a year in the United States. These numbers indicate the importance of research into serial homicide.

Research questions 1, 2 and 3 will be addressed by quantitatively analysing a database currently consisting of information on 3,949 serial homicide perpetrators. This database was originally initiated by Professor Michael Aamodt and his students at Radford University in the USA. In 1992, Professor Aamodt and his team started to gather data on serial murderers. Information was derived from a variety of different sources including prison records, information on databases such as Westlaw UK, media sources, true crime books and the Internet. All the gathered data was compiled to form the Serial Killer Information Center. Then in 2012 researchers from Florida Gulf Coast University (FGCU) built a user interface which enabled the database to be maintained and accessed over a secure Internet connection. The collaborative initiative is known as the Radford/FGCU Serial Killer Database research project (Aamodt, 2013a). Further, the Serial Homicide Expertise and Information Sharing Collaborative (SHEISC) is another independent effort which was created in 2010 in order to bring together an interdisciplinary team of researchers and practitioners to share rigorously collected data on serial homicide offenders. This team comprises of a number of high profile experts including James Alan Fox, Eric Hickey, Jack Levin, Janet McClellan, Bryan Nelson, Michael Newton, Kenna Quinet and John White. Each of these members contributed their dataset of serial killers which were subsequently all merged to become the 'SHEISC Joint Serial Killer Database'. Data was gathered from sources similar to the Radford serial killer database but also includes information/data from exonerations and social media. Then these data were combined with the Radford/FGCU Serial Killer Database in 2012 which is the first ever US national serial killer database for researchers and law enforcement professionals because, as Hinch (1998) strongly argues, data should be accessible.

The information on these 3,949 serial killers from this Radford/FGCU Serial Killer Database will be used in the proposed project. Similar data is not available in the United Kingdom or European Union. We will examine any evidence of psychosocial stressors in the background of the serial killers including: problems in school; teased in school; military background; physical deformity; family or own abuse of alcohol/drugs; sexual preference; speech defect; bed wetting; animal torturing; fire setting; psychological, physical or sexual abuse in childhood; parental divorce (although this type of information is not available for every serial killer). However, we are aware that there is a real risk of recall bias for some of these factors. For example, someone is potentially more likely to report a history of these things about an individual who is convicted of serial homicide or the serial homicide perpetrator themselves may be

more likely to recall these past psychosocial stressors when questioned. We will also examine clinical diagnosis or any evidence of psychopathology (including brain abnormalities; head injuries; exposure to chemicals; mental illness; spent time in mental health facility prior to killing; psychological diagnosis). There have been some studies which have investigated the relationship between neurodevelopmental disorders and violent criminality (e.g., Lundström, Forsman, Larsson, Kerekes, Serlachius, Långström, & Lichtenstein, 2013). Neurodevelopmental disorders includes six categories: Intellectual Developmental Disorders, Communication Disorders, Autism Spectrum Disorders (ASDs), Attention Deficit/Hyperactivity Disorder (ADHD), Learning Disorders, and Motor Disorders. The longitudinal relationship between ADHD and violent criminality has been extensively documented (e.g., Lundström et al., 2013), while long-term effects of ASDs, tic disorders (TDs), and obsessive compulsive disorder (OCD) on criminality have been scarcely studied. Again we recognise that after conviction a diagnosis is more likely. Even in childhood, if an individual is exhibiting behaviours that are true markers for later serial homicidal behaviour then they may be more likely to receive a diagnosis (or misdiagnosis) as children. This resultant dataset adopts the advice provided by Osborne and Salfati (2014) when they suggested including more cases by using a simpler, "more inclusive" interpretation of the current definition including various types of serial murderers (e.g., gang member, hitmen, etc). The database that the proposed study will use also allows different types of serial murder to be separated for analysis (e.g., serial sexual murder, serial murder, spree and mass murder). This is consistent with Brantley and Kosky's (2005) belief that the Federal Bureau of Investigation (FBI) favours broadness in that they are careful to avoid any reference to motivation, behaviour or psychological characteristics in their definition. The creators of this dataset allow the investigation of the full array of serial killers, allowing for a wider pool of cases to come under consideration. A potential limitation with this dataset is whether systematic information has been gathered for all of the cases in the file. However, this dataset is the largest, and to our knowledge, the only resource of its kind in the world available to researchers.

Research question 1 will assess the quality of data in the database and explore the availability of publicly available and accessible data to enhance the existing database. Several strategies will be explored to improve data capture for these cases of serial murderers. We will also identify the availability of publicly available and accessible data to enhance the existing database by electronic searching of information available and accessible to the public (i.e., information in the media). In sum, new data will be created which will complement the existing database.

So having assessed ways of gathering additional data to complement the database and included this new data, the remaining research questions will explore what the data can tell us with regards to the psychosocial and psychiatric antecedents of multiple murder. The aim of research question 2 is to identify the prevalence of prior diagnoses and psychological stressors which will be summarised overall and in subgroups defined by types of serial murderers. These figures will be compared to the general population using published prevalence figures, where available. This method will be used for addressing research question 2.

For research question 3, subgroups of the serial homicide dataset will be compared to identify differences in individual characteristics, prior diagnoses and psychological stressors. Quantitative statistical methods for between-group comparisons will be used (e.g. Fisher Tests, Wilcoxon-Mann-Whitney Tests) and the use of regression methods will be explored to assess multiple predictors of type of serial murder.

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*Weapon Choice and Body Count in Mass Murder: Is There a Relationship?**

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Gun control policies in the United States (US) have been a politically charged issue for several decades. The NRA and other advocacy groups lobby for minimal governmental controls on the possession and use of firearms, while other organizations, including the Brady Campaign, strongly support new federal and state legislation to place tighter restrictions on gun possession, transfers, and uses. And, the intense debate over gun control measures that followed the 2012 mass murders in Aurora, Colorado and Newtown, Connecticut[1] is a strong indicator that what Philip Cook (2014) terms "the great American gun war" will remain a fixture of US politics for the foreseeable future. Given the weapons used by the shooters at Aurora and Newtown, it is not surprising that many of the legislative efforts, including a federal effort to resurrect the Assault Weapon Ban (AWB) that expired in 2004, were reactions to these events focused on assault weapons.[2]

It is important to recognize that efforts to renew the federal AWB and enhance state controls on assault weapons have progressed in the absence of data showing that they are more deadly than other types of firearms (see Libby & Corzine, 2007). Evaluations of the impact of the 1994 AWB have focused on attempting to answer the question if the ban reduced the overall rates of homicide or violent crimes in the US (Kleck, 2001; Koper & Roth, 2001), although it is these weapons' perceived role in high casualty mass shootings that have spearheaded legislative attempts at suppression. We are not aware of any study to date that analyzes the relationship between type of weapon and the number of fatalities in mass murder incidents. The current paper is a beginning effort to close this gap in knowledge. Specifically, we analyze the relationships between weapons, including the three basic types of firearm, and the number of fatalities for mass murders, following the current definition of multiple killings with 3+ victims not counting the perpetrator (Huff-Corzine, McCutcheon, Corzine, Jarvis, Tetzlaff-Bemiller, Weller, & Landon, 2014).

Data and Methods

The homicide data used in the current study are taken from the SHR and the NIBRS for the years 2000-2012. The identification of mass murder incidents from the SHR, which

includes field for total number of homicide victims, is straightforward, and to our knowledge prior trend studies of mass murder have relied on the SHR, often supplemented by media sources (Duwe, 2007).[3] For the current investigation, data were extracted from the administrative, incident, and victim segments of NIBRS (Huff-Corzine et al., 2014).

The analyses reported in the following section begin with an enumeration of the frequency of use for all weapons in mass murder incidents from the SHR and NIBRS. An important consideration in judging the efficacy of policy attempts to restrict certain types of firearms as a response to acts of mass violence is their rate of adoption by perpetrators. Second, the analyses focus on the mean number of fatalities for each type. Although a particular type of weapon may be used infrequently, if it produces a significantly higher body count than alternatives, then efforts to restrict its availability may be warranted.

Unfortunately, the automatic vs. semi-autonomic distinction between firearms in NIBRS identified only 6 incidents where an automatic was used in a mass murder. Additionally, given the lack of detailed data on firearms, e.g., the presence of a large capacity magazine, and the difficulty of defining an "assault" weapon, the following analyses are by necessity limited to a comparison of the body count associated with handguns, rifles, and shotguns, along with other weapons.

Results

Table 1 provides an enumeration of the number of mass killings between 2001 and 2012 from both NIBRS and SHR data by type of weapon. NIBRS data in column 1 reflect a prominent role for firearms in mass murder incidents; they are the recorded weapon in only 259 of 354 cases (73.2 percent). Rifles and shotguns comprise 22.5 percent (41 of 182) of known firearms. An important difference between the NIBRS and SHR numbers discussed below is that twice the percentage, 29.7 versus 15.2, of firearms used in mass murders are identified as "unspecified" in NIBRS compared to the SHR.

Table 1: Frequency of Weapon Usage in Mass Murder Incidents, 2000-2012.

Weapon	NIBRS		SHR	
	Column 1		Column 2	
	Frequency	Percent	Frequency	Percent
Firearm, Unspecified	77	21.8	141	10.9
Handgun	141	39.8	609	47.1
Rifle	26	7.3	93	7.2
Shotgun	15	4.2	68	5.3
Other Gun	------	------	17	1.3
Knife/Cutting Instrument	36	10.2	132	10.2
Blunt Object	8	2.3	25	1.9
Personal Weapon	5	1.4	12	.9
Fire/Explosives	9	2.5	79	6.1
Poison/Drugs	2	0.6	8	.4
Strangulation/Asphyxiation/ Drowning	0	0.0	25	2.0
Unknown	12	3.4	-----	----
Other*	23	6.5	83	6.4
Totals	354	100.0	1292	100.0

*The "other" category includes both "other" and "unknown" weapons for the SHR.

Reflecting weapon choice for mass murders from NIBRS data, firearms are the most frequently used weapon in the 1292 cases from the SHR in shown in column 2. Specifically, guns are used in 71.8 percent of the mass murders (N=928). Handguns are the most likely weapon to be used in mass murders, accounting for slightly less than one-half of the cases (47.1%). Long guns are employed by offenders in 12.5 percent of cases with rifles being slightly more likely to be used than shotguns. The major point from the NIBRS and SHR numbers in Table 1 is that handguns are the most likely type of firearm and the most likely weapon overall to be employed in mass murders.

The percentages for weapons other than firearms are similar in the NIBRS and SHR databases with one exception. SHR records a significantly higher percentage of cases (6.1 versus 2.6) with fire/explosives as the weapon of choice, which most likely reflects this weapon's greater use in states that report to NIBRS.

Reflecting on the primary policy issue addressed in this paper, the potential efficacy of banning assault rifles as a response to mass murder, the numbers in Table 1 suggest that the effect would be slight. Rifles are the firearm of choice in less than 10 percent of mass murder cases in both SHR and NIBRS data and not all of these weapons would meet the criteria to be classified as an assault rifle. It would be relatively easy for a motivated offender to substitute another type of firearm subject to less stringent controls. Weapon substitution may produce fewer victims, however, if rifles produce more victims per mass murder incident than handguns and shotguns. We next turn to an examination of this question.

Table 2 shows the mean number of fatalities for different weapons used in mass murders from NIBRS and SHR data. Focusing on NIBRS data in column 1, the primary message is that the differences in mean number of victims between rifles and other weapons are moderate. Mass murder incidents with rifles as the weapon have a mean average of 4.31 victims versus 3.65 overall. The comparable numbers are 3.76 for handguns and 3.47 for shotguns. Following rifles, somewhat surprisingly blunt objects have the second highest mean victim count at 3.88. The N for blunt objects and several other weapons categories is low, i.e., below 10; however, so that the reported rate may be unstable.

Table 2: Mean Number of Fatalities in Mass Murder Incidents by Weapons Type, 2000-2012

Weapon	NIBRS		SHR	
	Column 1		Column 2	
	Mean	N	Mean	N
Firearm, Unspecified*	3.42	77	3.39	158
Handgun	3.76	141	3.47	609
Rifle	4.31	26	3.72	93
Shotgun	3.47	15	3.37	68
Knife/Cutting Instrument	3.42	36	3.28	132
Blunt Object	3.88	8	3.68	25
Personal Weapon	3.00	5	3.33	12
Fire/Explosives	3.78	9	3.86	79
Poison/Drugs	3.00	2	3.50	8
Unknown	3.33	12	------	------
Other**	3.70	23	3.56	108
Totals	3.65	354	3.49	1292

*The category of "Other Gun" from Table 1 has been merged with "Firearm/Unspecified."
**The category of "Strangulation/Asphyxiation/Drowning" from Table 1 has been merged with "Other."

Overall, the mean number of victims for weapons categories calculated from NIBRS data (see column 1) is very similar to those from the SHR in column 3. Specifically, among the firearms categories, rifles have the highest mean number of victims at 3.72 but this number is lower than that for NIBRS data. Comparable numbers for handguns and shotguns are 3.47 and 3.37, respectively.

Because our primary interest is in fatalities by types of firearms, we ran t tests for the difference between means for rifle vs. shotgun, rifle vs. handgun, and shotgun vs. handgun for both the SHR and NIBRS data sets. Although the use of rifles by shooters produces more victims per incident, none of the comparisons approaches significance at the traditional .05 level. For the NIBRS data, the tests for rifles vs. handguns [t = .340, p = .564], rifles vs. shotguns [t = .816, p = .374], and handguns vs. shotguns [t = 1.157, p = .285] are non-significant. For SHR data, the tests for handguns vs. shotguns [t = .578, p = .563] and shotguns vs. rifles [t = -1.093, p = .276] are not significant. For rifles vs. handguns, the test is significant at the .10 level [t = 1.333, p = .183].

Discussion

Returning to the primary questions underlying this investigation, FBI data on mass murder incidents provide limited support for the notion that AWBs would reduce the number of mass murder incidents or their body counts. In both the NIBRS and SHR databases, rifles have a higher mean number of victims for mass murder incidents than other types of firearms, handguns and shotguns, but difference in means tests are not significant at the .05 level. Of course, significance levels are bestowed with more importance in academic writing than in the policy-decision making process, and proponents of AWBs will find some support from the data.

The current study underscores some of the limitations of official data for analyzing mass murder previously identified by Huff-Corzine et al. (2014). Perhaps the basic message of the current article is that crime data compiled by the FBI is satisfactory for establishing trends in the number of mass murder incidents but has serious shortcomings for addressing the potential efficacy of policy interventions. At present, the use of these data sources will need to be enhanced through use of media accounts of mass murder, although their limitations are well-known (Huff-Corzine et al., 2104; Kelly, 2010).

Footnotes

1. On July 20, 2012, James Holmes purchased a ticket for the midnight showing of the film, *The Dark Knight Rises*, at the Century Movie Theater in Aurora, Colorado. After initially taking a seat, he left through an exit door and returned with multiple firearms. Twelve people died from gunshot wounds and 70 others were injured. A few months later, Adam Lanza killed 20 students and six faculty and staff at the Sandy Hook Elementary School in Newtown, Connecticut after first killing his mother at their nearby home. As of June 2015, Holmes is on trial in Colorado, while Lanza committed suicide at the elementary school.

2. There is no consensus in existing legislation or among researchers as to which firearms are "assault weapons." Among the firearms used by Holmes in Aurora, Colorado, was a Smith and Wesson M&P-15 semi-automatic rifle with a 100 round drum magazine; the 26 murders at the elementary school in Newtown, Connecticut, were committed with a Bushmaster XM15-E2S semi-automatic rifle, although Lanza had other firearms in his possession. Both of these firearms would be routinely defined as assault weapons under existing state statutes addressing assault weapons, but it is important to note that these laws also include some shotguns and handguns as assault weapons.

3. Ironically, neither the mass murder at Aurora, CO nor the one at Newtown, CT are included in the 2012 SHR, although both states reported other murders for the same months. The basic parameters of both cases are well established and are described in footnote 1, and we included them in the data set analyzed for this paper. The analyses were repeated without these two cases omitted, and the results did not change

significantly. We are currently attempting to determine why they do not appear in the SHR through contacting various FBI officials.

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Panel Session 2 Recorder Notes - ***Serial and Mass Murder***

Chair: Claire Ferguson – Recorder: Michael Becker

Addressing the Challenges and Limitations of Utilizing Data to Measure Serial Homicide

Enzo Yaksic & Michael Aamodt

Roland Chilton– What is the rate of serial homicide in the US
Enzo – you can't quantify that. We don't know what we don't know about. This is a work in progress.

Mindy Weller – You're asking for cooperation – are you touching on Fusion centers yet? Have you reached out on that?
Enzo – No, not yet. Have to be careful what you request.
Mindy – Since they pull from all different branches, they may be a good hub of information. Not all states have them.

Chris Rasche – If we don't know the rate – how do we know if it is a phenomenon in decline.
Enzo – we don't know really.
Chris – Well – then how do we know? Comments on how the most inane things get passed around. It should be easier to find hints of serial murder. Why you have been having more trouble than what you would expect to find this information.
Enzo – potentially because it's in decline.
Chris – Don't suggest that it's a phenomenon in decline. Suggest using more cautionary language. We don't know that if we don't know that.

Pawel W. – Mirroring the same question – how do we know that it's even in decline if we don't know what the rate is? Like the approach – but anecdotal evidence there doesn't even appear to be a guesstimation of serial murder in any countries.
Enzo – agreed – that was partially the motivation for the dashboard.
Pawel – we don't know how many cases of homicide, if unlinked could have actually been done by the same perpetrator. How to find out how many are on the loose? Is this just the tip of the iceberg? Or not?
Enzo – cases aren't retroactively added to prior year data.

Claire Allely – Neurodevelopmental and Psychosocial Risk Factors in Serial Killers and Mass Murders.
Roland Chilton – Curious about how she switched from Serial Killers to Mass Murder – please clarify the difference between these two and what the number of serial killers are that are assessed. What percentage are mentally ill.
Claire – There's very little that clearly looks at the rates of disorders and particularly in this group. It tends to be case studies. You're right – I'm interested in both mass murderers and serial killers. In our past paper, we grouped the two of them. I postulate that mass murderers have a potentially higher rate of autism. I think we should analyze them separately going forward.

Kathleen Heide – Do you have a sense of a population who have ASD – what percent are violent. We know that people who are profoundly mentally ill, the incidence of violence is quite low. I am concerned, as the reviewer pointed out – that the labeling can be very damaging.
Claire – We are not saying that ASD => violence. The additional factors (head injury + psychosocial factors) are crucial. There is current research on the occurrence of different disorders and it is rather profound. We are interested in identifying people who are principally at risk. What clusters make people much more likely? Find out ways to support this.
Chris Rasche – Have the same ethical concern – is there a more global issue? As homicide researchers – we take a nugget and blow it up into a media presentation of a case. That becomes the salient feature of the individual. In our research – do we need to discuss the ethical considerations? We need to be profoundly aware of the ethical dilemma. How do we approach that when our findings get cut down to the lowest denominator and salient nuggets.
Claire – We're looking at all clusters in psychiatric disorders in our following publications. We have to make abundantly clear what we are trying to do. I've been trying to publish a lot what we actually intended. Given that this is a present phenomenon, we cannot ignore that people do indeed have Aspergers. We're not establishing a causal link. It is a risk factor amongst many.
Adam Pritchard – On the topic of ethics. I don't know that it's a fair criticism. Everything we do as researchers stigmatizes a population. We stigmatize race, poverty, etc. How do they fit into a bigger picture. When we look at diagnoses of autism. That's associated with health insurance. They may not have a diagnosis due to this. We have cultural biases in MH d/x's. It's complicated to recognize this in the first place. We may see the red flags. There are hundreds of thousands of people in MH facilities – hindsight bias is huge here.

Sarah Ann Sacra and James McCutcheon – Weapon Choice and Body Count in Mass Murder
Vance McLaughlin – Almost all of the first slide on history is wrong
Paul Blackman – The AW high cap mag ban sunsetted on my retirement day. Bombs, Airplanes, and Fire are so much more effective mass murder weapons.
Kim Davies – did you only count single offenders?
James – We counted both multi and single offenders
Adam Pritchard – We're trying to get more information. I would recommend working directly with LE.
James – Very true. Given that we have manageable information for NIBRS, we'll give it a try.
Lynn Addington – given the level of detail that you're drilling down on – certain things are default. Maybe this is why you're seeing default fields rather than actual data. Especially if you're going to make policy statements, we need to figure out why we get "unspecified firearm" and have a full appreciation of how it gets input. It would very much strengthen the study and give a better understanding of the incidents and what they would involve.
James – I completely agree. I've never seen the other side of NIBRS. I've only seen what comes out of the other end.
John Jarvis – The state UCR folks know what's going on with this. The social process of how you record these things impacts why we get "unspecified". They're usually filled out very early stage. The officer may not be sure. And even if they did know – if they put it down and they're wrong. I may spoil my case from an investigative standpoint. There's a practical concern

toward putting more than "as little as possible". We attribute quality and quantity of data when it may not be there. This is the same for SHR.
Roland Chilton – How does the hierarchy rule apply?
James – Handgun is the top of that. That's primarily the impact in this case for SHRs
Dick Block – You have data on the mean – but you're not interested in mass murders on the mean. We're mass murders on the tail. We want to look at the 3k murdered. The mean is 3. The more violent mean is just over 3.
James – We have found that a lot of this is street crime. Some of these are domestic violence situations. Family annihilations. These aren't the "interesting stories"
Becky Block – Thinking of various forms of killing, the hierarchy rule, and investigation. Arson takes a long investigation. This could be a factor in lowering the figures for fire. In addition, I think at some times – you only took weapon 1. Given that you didn't have many many cases, you could look at it in more detail. Arsons have many more victims. Arson can also be a cover-up crime with auxiliary victims. Weapon 1 may not take into account. As Adam said, go back and talk with the investigators.
Dallas Drake – One thing I noticed was public vs private incidents. There's a huge distinction in the kinds of crime that occur in public v private. We end up with smaller numbers indoors (family annihilators) vs outdoors which can be public areas which tend to be more populated.
Jay Corzine – Generally for family annihilations – it depends on the family, but it can often be African Americans.
Dallas – But small numbers.

Panel Session 3: ***Homicide Investigation and Prosecution***

Chair: Chris Rasche – Recorder: Trisha Whitmire

Exploring Recent Trends in Police Responses to Homicide, Violence, and Property Crimes: A Glimpse at Trends in 81 Agencies Since 2000[3]

Tim Keel
John Jarvis
Kaitlin Signor

Abstract

This work will explore a trends project that examines variation in police agency homicide clearances. Eighty one cities in three workload frequency categories are examined over the thirteen year period since 2000. Conclusions relative to police capacity to solve cases are sought. Specific insight is outlined pertaining to high and low rates of homicide clearance relative to clearances for other offenses. As such, simple cross tabular and trend analyses reveal concordant and discordant relationships relative to clearance activity by individual agencies over time. Speculation as to relevance to both theory and practice are also invited.

Introduction

Recently the body of literature devoted to examining the question of what police agencies can do to stem the tide of flat or decreasing homicide clearance trends (See Carter and Carter, 2015; Carter, 2013; and others). The prevailing contention in this extant literature is that evaluation of homicide units within police agencies will reveal "best practices" and contrast with less than ideal organizational responses to the problems posed by escalating frequencies of reported homicides resulting in the lack of a successful arrest and prosecution of any parties to these crimes. In general, this research has examined a variety of different aspects of police agency capacities to investigate these criminal incidents. These include, but are not limited to, various elements of the crime such as victim characteristics, incident attributes, investigative aspects of the case, and the use of tools such as criminal investigative analysis and forensics in such investigations. As a result of these efforts, the following observations can be gleaned: There is a higher likelihood of clearing homicides when the case becomes known to the police immediately following its occurrence (add cite); cases occurring outdoors are more likely to go unsolved than those occurring indoors (Addington, 2006; Litwin, 2004; Litwin and Xu, 2007; Mouzos and Muller, 2001; Wellford and Cronin, 1999); agencies that have adequate resources to investigate all cases are more likely to produce results than those agencies that are understaffed and under-resourced (add cites). Lastly, specific to types of homicide-felony- and

[3] This material represents a working draft prepared for presentation and discussion at the Homicide Research Working Group Meetings, Clearwater, FL June 2015. Additional edits are anticipated including, but not limited to, more complete citations and additions or deletions of analytical results. Do not cite, replicate, distribute, or otherwise use this material without permission from the authors.

drug-related homicides have lower clearance rates (Cardarelli and Cavanagh, 1994; Lee, 2005; Litwin, 2004; Mouzos and Muller, 2001; Regoeczi and Jarvis, 2013; Regoeczi et al., 2000; Riedel and Rinehart, 1996; Rinehart, 1994; Roberts, 2007. Mixed findings persist when it comes to other aspects of homicide cases, including variable influences of victim gender, victim race, victim prior criminal record, investigator workload, investigator experience, and the availability and utility of forensic evidence (add cites).

In spite of the growing research in this area, little consensus over the importance of some aspects of homicide investigative capacity and the ensuing strategies is evident from the literature (a notable exception may be Jarvis and Regoeczi, 2012). Clearly much remains to be discovered as to the evidence-base for particular practices or strategies that can sustain and enhance police capabilities to solve homicides. The current study is an effort to illuminate one facet that may fill this gap. Specifically, we focus on the following research questions:

1. **Do trends in violent crime clearances have any relevance or association with homicide clearance trends?**

Even cursory inspection of these trends in conjunction with homicide clearance trends may reveal some obvious similarities which may have a common root cause. If so, the obstacles for police in solving non-homicide cases may persist and aggravate the efforts to solve the more serious offence of homicide.

2. **Do property crime clearance trends exhibit similar correlative influences on homicide clearance rate trends?**

The loss of property and its ensuing investigation may be indicative of the ability of not only citizens to safeguard their valuables but also reflective of the capacity of the police to investigate and solve crimes in general.

3. **Are violent crime clearance trends and property crime clearance trends similarly inexorably tied to general police agency capacities to solve crime?**

While this is tangential to the focus of the argument here, for completeness such relationships may be more indicative of a longitudinal capacity to effectively address investigative capacity of the police agency. That is, traditionally effective investigators have generally developed acumen via a trajectory of investigative assignments from property crime to violent crime to homicides. Aggregating this process would suggest that both property crime clearance trends and violent crime clearances may be leading indicators of future homicide clearance trends. To examine these possibilities, we begin by assessing these clearance trends in 81 cities that have been tracked since 2000 as detailed below.

Data and Methods

The current study uses data culled from a sample of 81 cities that initially were participants in an earlier survey study pertaining to homicide clearance processes (see Keel,

Jarvis and Muirhead, 2009). Subsequent to this original study, the trends as reported to the FBI Uniform Crime Reports were tracked thru 2013. This led to a 13 year trend for the 81 cities that form the basis for the matrix of data presented here. These data were then drawn upon to exam the research questions detailed above with an eye toward how these trends may shed light on the on-going dynamics of police response to homicide. Additionally, inspired by but varying from other recent research efforts in this general area of inquiry (see specifically, Mancik, Regoeczi, and Jarvis, 2014), we seek to compare and contrast trends in violent and property crime trends in an effort to ascertain if such trends are either contemporaneous or leading indicators of expected homicide clearance rates. The tables and charts presented herein depict the analysis that we have produced to this point. It is expected that alternative analytical approaches may also be appropriate including but not limited to pooled time series approaches. Nonetheless, disentangling whether property and violent crime clearance trends impact the trends in homicide clearance is the goal of this effort. The implications may be important both to further research and to practical aspects of agency efforts to investigate criminal activity. To begin, we computed chi square analyses as well as trend charts so that relevant patterns over the 13 year period could be visualized. Additionally, three categories of police agencies as determined by the volume of reported homicides are relied upon to illustrate such influences. The initial descriptive and bivariate analyses reveal that such associations, if found, may be indicative of a holistic agency approach to improving crime clearances rather than simply focusing upon the investigative capacity as it pertains to the most serious offenses that become known to the police. This noted, the results are shown in Table 1 and Figure 1 respectively. The significant Chi-square results shown in Table 1 reflect the strength of association between violent crime clearances and homicide crime clearances which suggests a modest relationship with a strength of .367 per the Cramer's V and Spearman Correlation values.

Table(s) 1: Crosstabular Analyses of Clearance Rates

MURRATE_HILO * MODVC_HILO Crosstabulation

Count

		MODVC_HILO		Total
		LO	HI	
MURRATE_HILO	LO	30	11	41
	HI	11	28	39
Total		41	39	80

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	16.175[a]	1	.000		
Continuity Correction[b]	14.426	1	.000		
Likelihood Ratio	16.766	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	15.973	1	.000		
N of Valid Cases	80				

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Nominal by Nominal	Phi	.450			.000
	Cramer's V	.450			.000
	Contingency Coefficient	.410			.000
Ordinal by Ordinal	Gamma	.748	.110	4.500	.000
	Spearman Correlation	.450	.100	4.446	.000[c]
Interval by Interval	Pearson's R	.450	.100	4.446	.000[c]
N of Valid Cases		80			

MURRATE_HILO * MODPC_HILO Crosstabulation

Count

		MODPC_HILO		Total
		LO	HI	
MURRATE_HILO	LO	27	15	42
	HI	12	26	38
Total		39	41	80

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8.542[a]	1	.003		
Continuity Correction[b]	7.283	1	.007		
Likelihood Ratio	8.708	1	.003		
Fisher's Exact Test				.004	.003
Linear-by-Linear Association	8.435	1	.004		
N of Valid Cases	80				

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Nominal by Nominal	Phi	.327			.003
	Cramer's V	.327			.003
	Contingency Coefficient	.311			.003
Ordinal by Ordinal	Gamma	.592	.154	3.095	.002
	Spearman Correlation	.327	.106	3.053	.003[c]
Interval by Interval	Pearson's R	.327	.106	3.053	.003[c]
N of Valid Cases		80			

MODVC_HILO * MODPC_HILO Crosstabulation

Count

		MODPC_HILO		Total
		LO	HI	
MODVC_HILO	LO	26	14	40
	HI	12	27	39
Total		38	41	79

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	9.269[a]	1	.002		
Continuity Correction[b]	7.948	1	.005		
Likelihood Ratio	9.463	1	.002		
Fisher's Exact Test				.003	.002
Linear-by-Linear Association	9.151	1	.002		
N of Valid Cases	79				

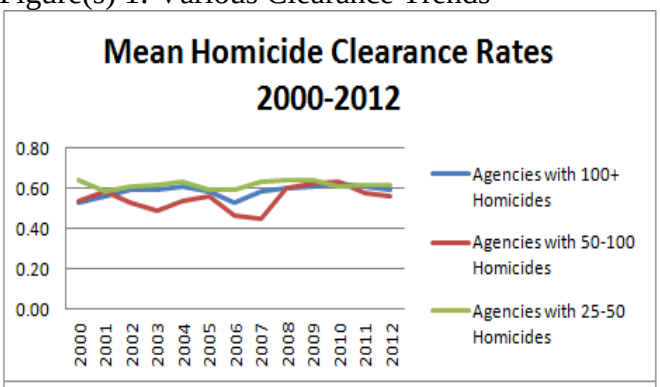
Symmetric Measures

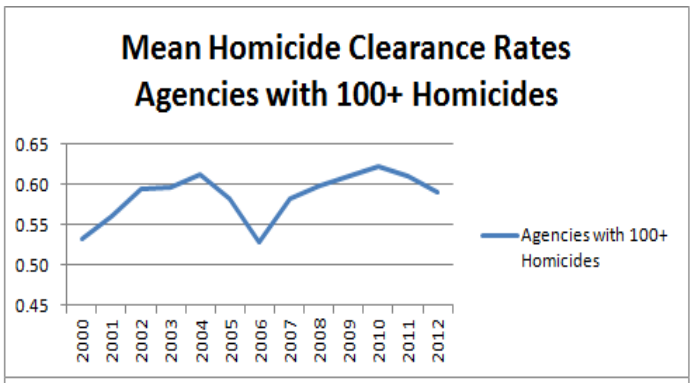
		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Nminal by Nominal	Phi	.343			.002
	Cramer's V	.343			.002
	Contingency Coefficient	.324			.002
Ordinal by Ordinal	Gamma	.614	.150	3.242	.001
	Spearman Correlation	.343	.106	3.199	.002[c]
Interval by Interval	Pearson's R	.343	.106	3.199	.002[c]
N of Valid Cases		79			

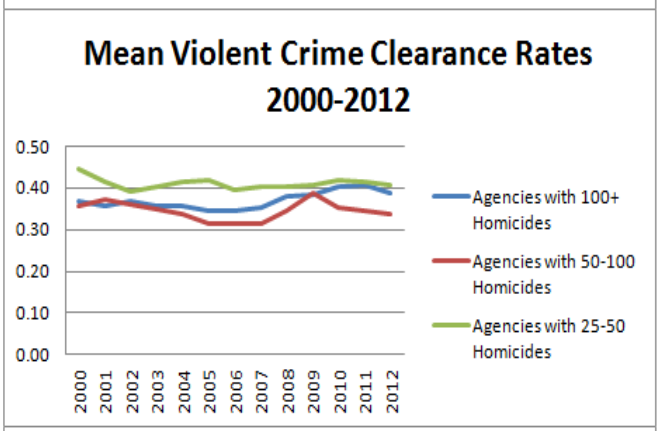
Viewing these results as proportional reduction in prediction errors suggests that agencies that knowing that an agency reports high violent crime clearances improves predictions of high homicide clearances by about 37%. Stated another way, if an agency has the capacity to solve non-lethal violent cases, they are more likely to also have the capacity to solve those cases that result in lethal outcomes. This is a rather simplistic analysis but nonetheless yields some interesting evidence about police responses to crime in general as will be discussed later.

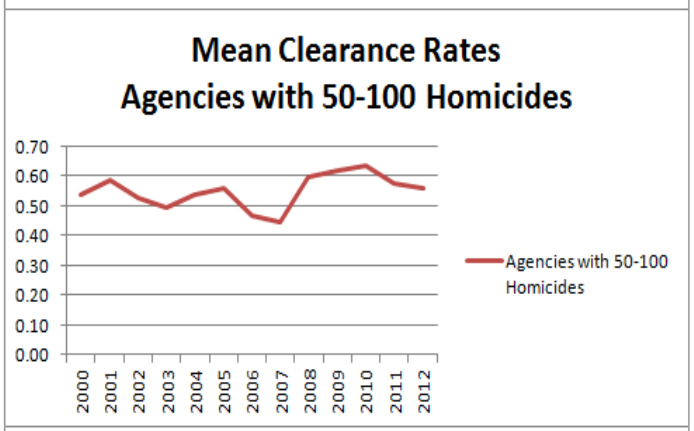
Turning to the trends over time for illustration purposes, Figure 1 displays the trends in the three Florida agencies and stratifies the trends by agency volume of reported homicides.

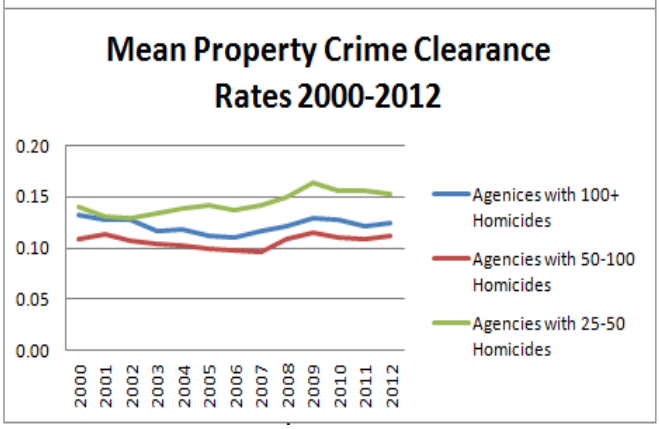
Figure(s) 1: Various Clearance Trends

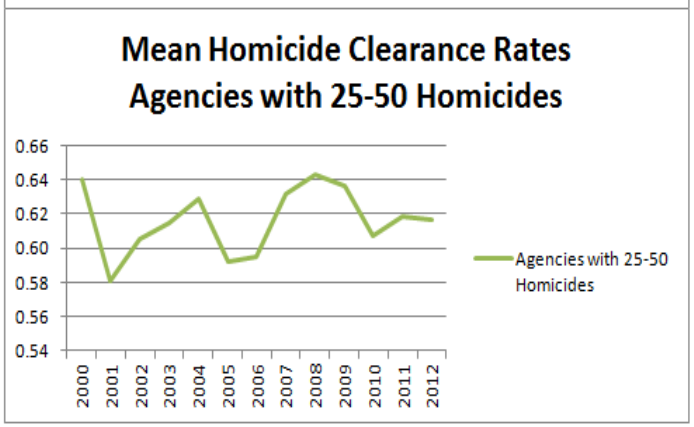


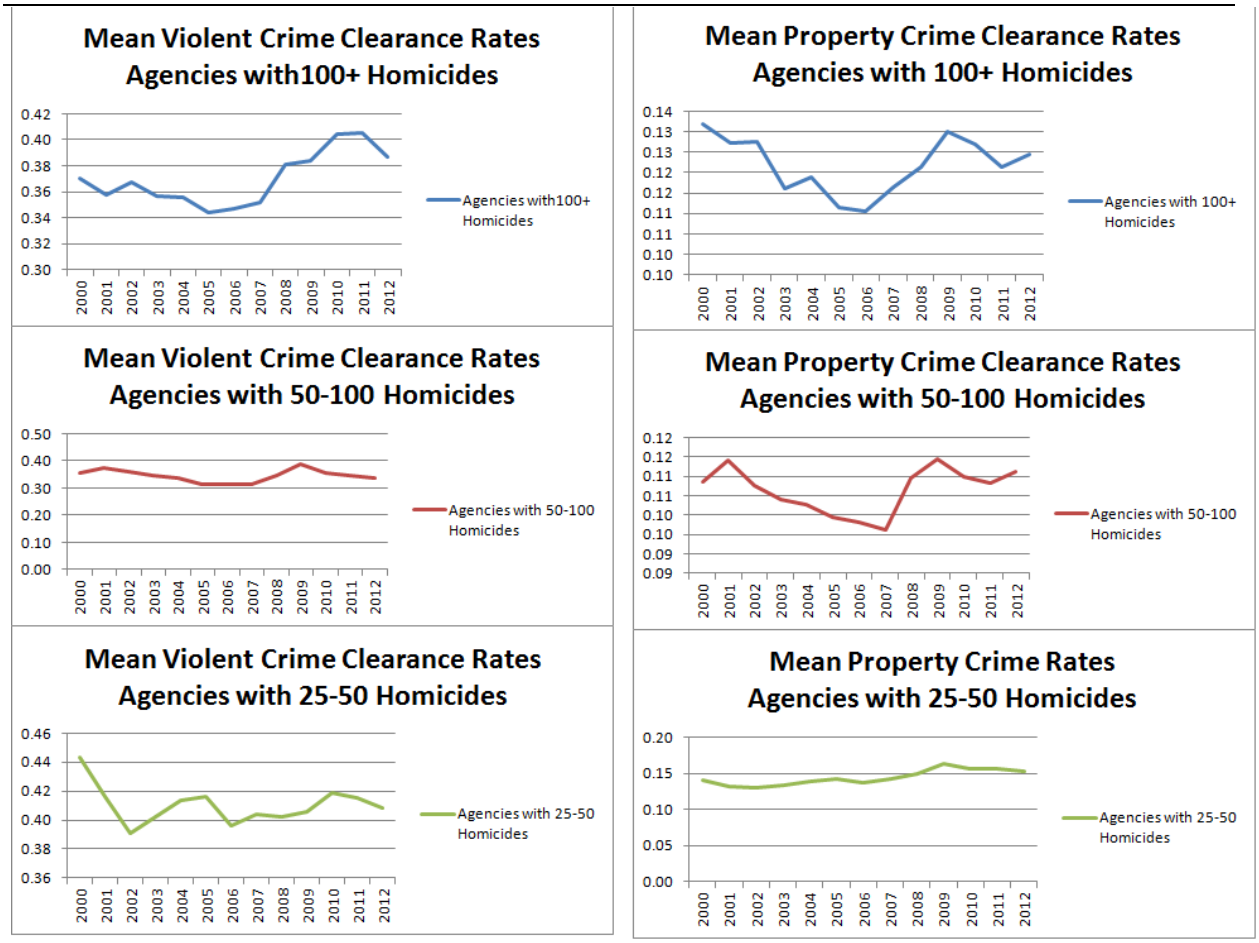


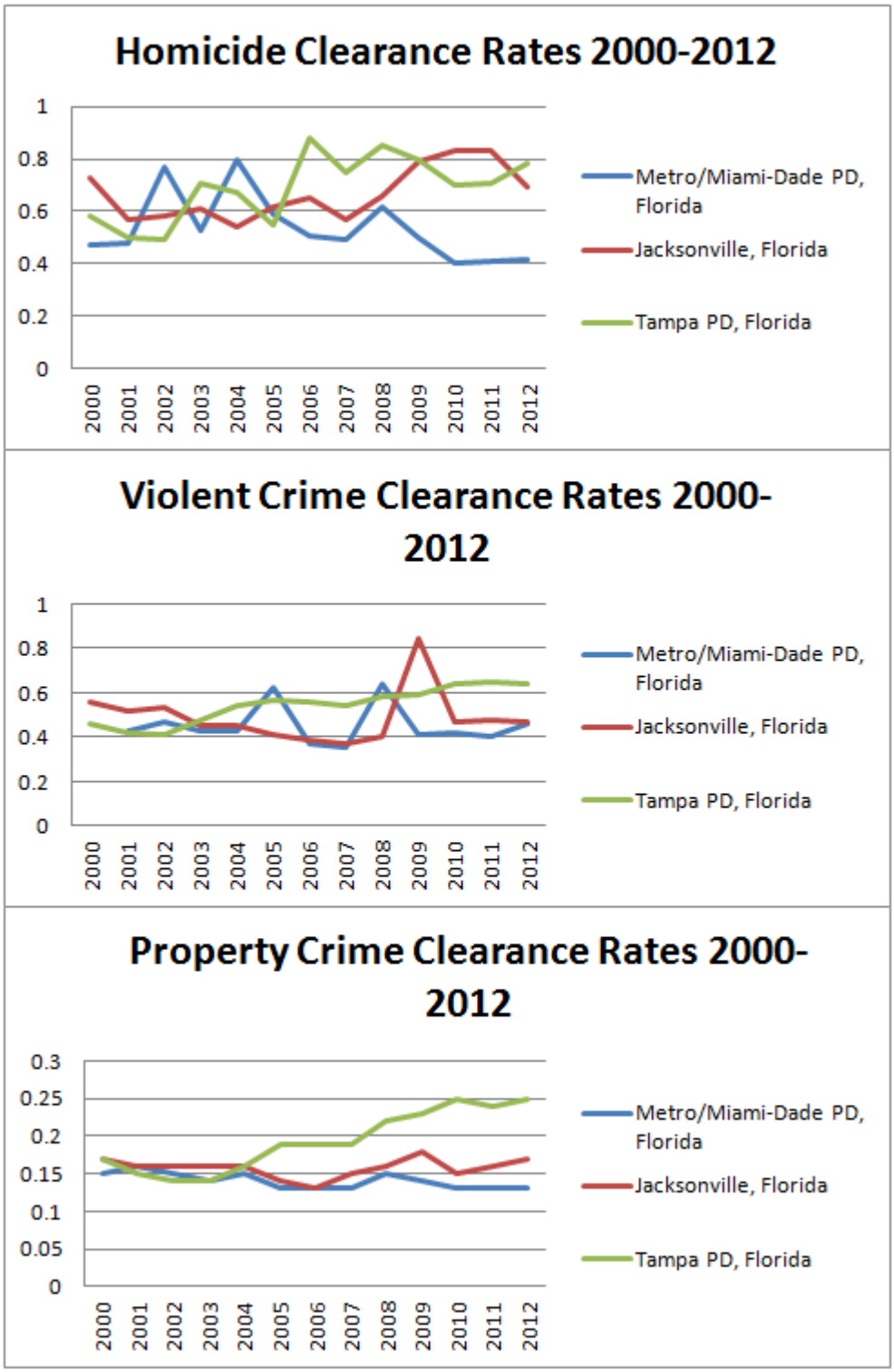









Mean Violent Crime Clearance Rates
Agencies with100+ Homicides
Agencies with100+ Homicides
Mean Property Crime Clearance Rates
Agencies with 100+ Homicides
Agencies with 100+ Homicides
Mean Violent Crime Clearance Rates
Agencies with 50-100 Homicides
Agencies with 50-100 Homicides
Mean Property Crime Clearance Rates
Agencies with 50-100 Homicides
Agencies with 50-100 Homicides
Mean Violent Crime Clearance Rates
Agencies with 25-50 Homicides
Agencies with 25-50 Homicides
Mean Property Crime Rates
Agencies with 25-50 Homicides
Agencies with 25-50 Homicides


Homicide Clearance Rates 2000-2012
1
0.8
0.6
0.4
0.2
0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Metro/Miami-Dade PD, Florida
Jacksonville, Florida
Tampa PD, Florida
Violent Crime Clearance Rates 2000-2012
1
0.8
0.6
0.4
0.2
0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Metro/Miami-Dade PD, Florida
Jacksonville, Florida
Tampa PD, Florida
Property Crime Clearance Rates 2000-2012
0.3
0.25
0.2
0.15
0.1
0.05
0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Metro/Miami-Dade PD, Florida
Jacksonville, Florida
Tampa PD, Florida

The three trend charts that comprise this figure reveal important variation in the trends over time with Tampa exhibiting the highest clearance capacity over time and Miami representing the lowest of the three agencies depicted.

Preliminary Discussion and Conclusions

The goal of this work was to examine the clearance trends in the 81 city sample to determine if any evidence exists in answering the following questions: 1) of whether trends in violent crime clearances have any relevance or association with homicide clearance trends; 2) Similarly, do property crime clearance trends exhibit similar correlative influences on homicide clearance rate trends; and 3) are trends in violent crime clearance trends and property crime clearance trends similarly inexorably tied to general police agency capacities to solve crime.

The bivariate analyses (CHI SQUARE) suggests support for the first two questions in that police agencies that have the capacity to solve crime of any type are more likely to have the capacity to solve homicides. The trend analysis is a little less demonstrative as it is more descriptive than explanatory. Nonetheless, such examinations do illustrate the variances in individual agencies and support the general qualitative observations that police agencies that have homicide clearance challenges almost always have challenges in other areas of policing that the agency is responsible for delivering to their communities. This does not discount other issues including, but not limited to, community variability relative to cooperation with police investigations, variable ability of citizens to safeguard themselves and avoid loss circumstances or situations which may jeopardize life and/or property, and other factors which influence the trust and transparency of police agencies in providing public safety to communities. That withstanding, the statistical data explored here suggests that police agencies that focus on investigating and responding to even the least serious criminal matters may experience even more success in their capacity to effectively investigate more serious crimes that may come to their attention.

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An Examination of Investigative Practices of Homicide Units in Florida

Richard Hough[4] and Kimberly M. Tatum[5]

Abstract

In this study we present findings from Florida law enforcement agencies on their investigative practices related to homicide. We use practices previously identified to determine whether agencies have adopted best (or most frequent) practices and the impact this has on homicide clearance rates. Among others, these factors include case load, number of investigators assigned, and investigative tools. The study intended to examine agencies which handle at least 25 homicides per year as well as those that handle fewer cases. Florida is the third most populous state in the U.S. with a mix of law enforcement agencies, and rural, suburban, and urban areas.

Keywords
Homicide, homicide investigation, clearance rates

Introduction

In the 1960s homicides cases in the U.S were clear at a rate of around 90%. By 2012 this rate had dropped to 62.5% (FBI, 2013). Some of the changing landscape of homicide involves the ongoing refinement of intelligence-led policing and all that means for the gathering and use of data. Some of this may be reflected in the examination of micro-level aspects of crime events – such as individuals and specific locations, rather than groups and neighborhoods. As we examine contemporary practices in the investigation of the most serious crime, we hope to provide some measure of what the future of such investigations hold.

Criminology broadly studies crime. This broad approach takes in definitions of crime, crime causation, criminals, societal response to crime, crime consequences, and the punishment for those who commit crime. Criminology is an applied science integrating the insights from many disciplines to form law, policy, and strategies to prevent, reduce, or solve crimes. Criminal justice grew out of criminology as a discipline more focused on the responses to crime. Law enforcement agencies have policies and procedures covering most aspects of department operations. This reality of government agencies is driven by the goals of effective work, reduced liability, efforts to earn public confidence, and for increasing numbers of agencies the

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requirements of an accrediting body. Most agencies would be assumed to have a policy and perhaps operational procedures on the investigation of death cases.

Review of the Literature

Much is written about criminal homicide. A great deal of research focuses on victimology issues or examines offenders, the setting of homicide events or, as with Miethe and Regoeczi (2004), the combination of factors including time and place.

The applied and policy domains of homicide have received increasing attention in the research with notable documents including the 2013 report "10 Things Law Enforcement Executives Can Do to Positively Impact Homicide Investigation Outcomes", a collaboration between the Bureau of Justice Assistance (BJA), the International Association of Chiefs of Police (IACP), and the Institute for Intergovernmental Research (IIR), and the 2007 Police Executive Research Forum (PERF) publication of "Promoting Effective Homicide Investigations."

The Current Study

This was an exploratory study to look at common practices of law enforcement agencies that investigate homicide. The study did not have homicide case clearance per se as a focus. Recent research continues to specifically examine the connection (correlation?) of police actions to clearance rates (McEwen, 2009; Keel, Jarvis, and Muirhead 2009). Instead, we sought to get a sense of the common practices among homicide investigative units in a populous state and thus make a statement of frequent practices.

Criteria for Inclusion
We contacted all law enforcement agencies in the State of Florida with a valid e-mail address and that have the responsibility for investigating homicide.

Data Compilation
With the assistance of the chief of police of Florida municipality, contact was made with all Florida law enforcement agencies with the responsibility to investigate homicides. A web-based survey was conducted of the identified agencies.

Findings

Eighty-four agencies responded with responses to a varying number of the 28 substantive questions asked. Several of the questions inquired about agency size, population of the jurisdiction, and whether the agency was a sheriff's office or a police department. In this research note we include select tabulations for seven of the questions. A more complete analysis of all responses is forthcoming.

Question 4. How many homicides were investigated by your agency in 2013?
The sample included 82 usable surveys from law enforcement agencies representing 462 homicides investigated. 31 of the responding agencies investigated no cases of homicide during

the review period. Nine departments were responsible for 71% of the cases with clearance rates ranging from an agency investigating 19 cases with a 37% clearance rate to an agency investigating 49 cases with a 66% clearance rate and an agency investigating 113 cases with a 54% clearance rate. These nine agencies had an average caseload of 36.6.

Question 7. Do you have a written policy that covers homicide investigations?
47.6% or 40 of the agencies responded that they do have such a policy and 52.4% or 44 agencies said that they do not have a written policy on homicide investigations.

Question 10. What types of investigators are assigned to homicide cases?
29 agencies or 37.2%, use Gen. assignment detectives to investigate homicide cases. 19, or 24.4% of agencies use major crimes detectives. 14.1% of the agencies, or 11 departments, use persons crimes detectives. The remaining 19 agencies responding to the survey, or 24.4%, specified other.

Question 11. Does your agency have a rotation policy for detectives?
21.8% or 17 of the departments responded that they do have a rotation policy for the tactics. 78.2 or 60 one of the agencies said that they do not have this policy.

Question 13. What is the average investigator's annual homicide caseload as primary detective at your agency?
Most departments replied that investigators on average handled only one homicide each during the year. Some of the larger agencies ranged as high as five homicides per investigator.

Question 15. Does your agency's investigative unit use a Computerized Case Management System (CCMS)?
66.7%, or 52 agencies, replied that they do use a computerized Case management system and 33.3% or 26 agencies replied that they do not.

Question 25. What are the barriers to achieving higher clearance rates at your agency? Please mark all that apply.
52.6% or 41 of the agencies surveyed cited lack of public or witness cooperation is the single greatest barrier to achieving a higher clearance rate. Other responses included personnel shortages, legal issues or issues with prosecutors, or “other”.

Implications for Future Research

The goal of competent and successful retroactive investigation of homicide will continue to deserve attention. All manner of organizations often confuse most frequent practices with “best practices.” With that said, correlating homicide clearance rates to a meaningful cluster of procedures can yield helpful information for agency administrators to consider in the use of limited resources.

Discussion

The first purpose of this study was to determine whether investigative units followed in some way certain practices associated with previously identified best practices in homicide investigations.

While there was not an initial intention to propose a model policy for agencies regarding homicide cases, content analysis did yield useful commonalities that have been reported to the participating agencies as well as other departments identified through the law enforcement associations within the state. Several areas that we will focus on in the next level of analysis include:

- The number of investigators initially responding to a homicide.
- Supervisory monitoring of cases.
- Team review of progress.
- The use of software.

The individual level examination of investigators was of great interest but consciously excluded from this study. While detectives approach death investigations from a number of personal orientations, the agency protocols and supervisory structure is assumed to control somewhat for this individual variation. The efforts of detectives investigating this most serious of violent crimes has shown relatively little evidence of being influenced by extralegal factors in any event (Addington, 2006; Regoeczi, Jarvis, & Riedel, 2008). At this exploratory stage we have not examined the police devaluation hypothesis discussed by Keel, Jarvis, and Muirhead (2009) as to effect on clearance rates of the jurisdictions for which data was gathered.

Conclusion

While a comprehensive commentary on most effective procedures in the investigation of homicide is beyond the scope of this research note, it is clear that agencies run their units differently.

Many solvability factors include those under the control of police and ones that are not. Homicides are different and there is a need for agency policies to take this fact into account. The actions prescribed by policy and taken by actual investigators can impact whether a case is successfully concluded.

Detectives and the various other actors in the investigative event may eventually be in a court responding to specific questions. The ability to influence the success of a case begin long before this in the immediate actions of the first officer on the scene to summon homicide detectives, secure the scene, and identify and persuade witnesses to remain (McEwen, 2009). Then the officers and detectives and crime scene investigators must write thorough reports that accurately and comprehensively provide all available information in an ongoing manner as the investigation proceeds.

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Guilt, Evidence, and Probability

by
Tom McEwen
and
Wendy Regoeczi

In this article, we apply a probability model, known as a Bayesian network, to illustrate an approach for quantifying (1) the probative value of evidence and (2) guilt beyond a reasonable doubt. We use the specific case of Kirk Bloodsworth who was arrested and convicted for the murder of Dawn Hamilton on July 25, 1984. His arrest occurred on August 8, 1984, and he was convicted on March 8, 1985, receiving a sentence of death in a gas chamber. On appeal, a second trial was granted based on several inadequacies in the initial trial. That trial, in March 1987, also resulted in conviction with a sentence of life imprisonment. Bloodsworth maintained his innocence throughout both proceedings. In 1992, he requested DNA analysis of biological evidence found on Dawn's clothing at the scene. DNA analysis was only starting to be recognized as an investigative tool at that time. The analysis exonerated Bloodsworth as the offender and he was released in 1993 after nine years in prison. The case is historically important because he was the first person to be exonerated through DNA analysis.

Guilt beyond a reasonable doubt lies at the foundation of the American jurisprudence system for convicting a defendant accused of a crime. The term means that no other logical explanation can be derived from the facts except that the defendant committed the crime. It recognizes that absolute certainty of guilt is impossible and that jurors may find a defendant guilty even though some, usually small, degree of doubt exists in their minds.

Prosecutors present evidence (witnesses, specialized experts, forensic evidence, etc.) to demonstrate guilt beyond a reasonable doubt, while defense attorneys try to refute the evidence and cast enough uncertainty with jurors to persuade them away from conviction. Witnesses and forensic evidence usually play key roles in trials in which a defendant has been charged with homicide. In some trials, testimony from witnesses is the most important factor in determining guilt or innocence, while in other trials, forensic evidence (especially DNA evidence) is most important.

The need for quantification is reflected by the legal standard that a guilty verdict can be reached by a jury only if there is *proof beyond reasonable doubt* that the defendant knowingly committed the offense. By introducing the idea of reasonable doubt, jurors are consciously asked to establish a threshold, or probability, beyond which the defendant should be found guilty. Several studies have asked judges, jurors, and jury-eligible citizens to provide numerical estimates of probabilities in criminal cases that in their opinion correspond to the standard of reasonable doubt (Dane, 1985; Dhami, 2008; Simon, 1970; Simon & Mahan, 1970). Results from these studies have generally shown probabilities between 79% and 89% as a standard.

Probability is implicit in the definition of guilt beyond a reasonable doubt and in the impact of evidence on jurors at a trial. Judges provide jurors with guidelines on determining reasonable doubt, leaving it up to them to decide whether sufficient evidence has been presented to conclude such doubt exists, thereby finding the defendant innocent, or whether the evidence leads to a verdict of guilt beyond a reasonable doubt. The decision also rests on each juror's beliefs about the credibility of the evidence, especially on eyewitness accounts,

relevance of physical evidence, and expert witness testimony on evidence interpretation. Jurors subjectively assign probabilities to these beliefs during their deliberations.

Our presentation provides more details on the case and shows how a Bayesian network can be developed to show the probative value of evidence with an application to the first trial in which Bloodsworth was found guilty.

The Case

The following is a summary of the initial incident, arrest of Bloodsworth, and his first trial. Because of page limitation for this summary, we cannot include follow-up descriptions of his second trial in which he again he was found guilty and his subsequent exoneration after nine years in prison:

On the afternoon of July 25, 1984, police found the body of Dawn Hamilton, 9 years old, in a densely wooded area outside the town of Fontana Village, Maryland. She had been brutally assaulted (reflected by a herringbone shoe pattern on her neck), raped, and killed. Earlier that day, she had been reported missing to the police by her caretaker. Investigators determined that she had stopped by Bethke's Pond while trying to find her friend, Lisa, and talked to two boys she knew, Chris Shipley, age 10, and Jackie Poling, age 7, about a turtle they had just caught. A man approached, and after a brief conversation, offered to help Dawn find her friend. The two walked away from the pond toward the woods. She was not seen after that encounter until her body was discovered in the afternoon.

A composite likeness developed by investigators with Chris eventually led to the identification of Kirk Bloodsworth as a suspect. It had been determined that he was not at work on July 25, 1984, and that he had been arguing with his wife. A six-picture array that included Bloodsworth was shown to Chris and Jackie. Jackie said he did not see a picture of the man among those in the photo array, but Chris pointed to Bloodsworth's photograph saying only that the man's hair may have been a slightly different color. Investigators discounted Jackie's lack of identification based on his age and general inability to describe the meeting at the pond. Chris was viewed as a more reliable witness.

The composite picture was widely circulated and Kirk Bloodsworth was arrested on August 8, 1984, based on one of the numerous tips that had been received by police. A few days after arrest, Chris and Jackie viewed a six-man lineup in which Bloodsworth was included. Chris did not choose anyone while in the lineup room, but while exiting the room told investigators that number six, Bloodsworth, was the man he met at the pond. Jackie pointed to number three, someone other than Bloodsworth. Two weeks later, his mother contacted investigators to say that Jackie had told her he was scared at the lineup, had picked the wrong man, and that number six was the man by the pond. He was afraid that the man might hear him and come looking for him. Jackie and his mother would testify at both of Kirk Bloodsworth's trials.

Because of its sensational nature, publicity was extensive about the murder of Dawn Hamilton and Bloodsworth's arrest. His picture was in the papers and shown repeatedly on television newscasts. Several people called the police to say they recognized his picture. One witness, Nancy Hall, identified Bloodsworth in a six-man lineup as the person she had seen outside her residence on the morning of the slaying. Her neighbor, Donna Ferguson, also

identified Bloodsworth in another lineup. Nancy Hall and Donna Ferguson became prosecution witnesses at both trials.

James Keller called investigators on August 10, 1984, after he saw Kirk Bloodsworth on television. He told investigators that while driving to work at about 5:45 a.m. on the morning of the murder, he thought that he had passed Bloodsworth walking near the fence next to Bethke's Pond. Even though he had viewed the television coverage, investigators arranged a lineup and James Keller picked out Bloodsworth. Keller testified at both trials that Bloodsworth was the man he had passed near the pond on July 25, 1984.

The defense was not without its own witnesses to provide an alibi for Bloodsworth. Testifying that he was home on the morning of July 25, 1984 were his wife (Wanda), her mother (Birdie Plutschak), and Wanda's half-sister (Dawn Gerald). Two other individuals—Wayne Palmer and Jeffrey Wright—testified that they were at Bloodsworth's house during the afternoon. The credibility of these five witnesses was questioned on the grounds that they were either related to or friendly with the defendant.

Very little physical evidence was collected at the scene, and most of the evidence proved to be of no benefit to the investigation. At trial, a fiber analyst tested that a head hair from the scene was intertwined with a red fiber, probably from a carpet and perhaps from Dawn Hamilton playing on the carpet. The analyst had not been asked to make a comparison with her hair. A serology expert who had examined Dawn Hamilton's shorts and underpants from the scene testified that he had not been able to identify any semen on either piece of clothing. Cotton swabs taken by the medical examiner from her body also had no identifiable semen. Finally, traces of blood on a rock, believed to have been used to hit Dawn, were insufficient quantity to test.

One item of physical evidence was especially controversial. Investigators had recovered a pair of tennis shoes from Dawn Gerald's house that they claimed to be the same size as the shoes that Bloodsworth wore. At trial, an investigator testified that he had measured them with a ruler to be 10 ½ inches from toe to heel, stating that Bloodsworth's wore size 10 ½ shoes. Defense lawyers noted that a measurement from toe to heel was not the same as a shoe size, and that the shoes were actually size 8. An expert witness for the prosecution testified on a comparison of herringbone marks on Dawn Hamilton's neck with the soles of the tennis shoes taken from Dawn Gerald's house. While stating that the comparison was limited, the portions of the body mark that were visible did correspond with portions of the shoe soles. On cross-examination, he could not say whether the body markings were from the left or right shoe, whether the body markings were made by those shoes, and agreed that hundreds of thousands of these types of shoes were sold each year.

The jury reached a guilty verdict on March 8, 1984, and Bloodsworth was sentenced to die in the gas chamber. Junkin (2005) summarizes the thinking of jurors as told in interviews with six jurors by a reporter for the Evening Sun who wrote a story about the trial. Jurors uniformly found the state's identification witnesses to be credible and thought that the testimony of the three alibi witnesses had been rehearsed. The similarities between the shoes recovered from Dawn Gerald's house and the herringbone-patterned marks on Dawn Hamilton's neck were also convincing evidence for the prosecution. One juror, who wore a 10 ½ size shoe, tried on the shoes and was able to wear them without much problem.

Probative Weight of Evidence

If *H* is the hypothesis that a defendant is guilty, then the odds in favor of guilt, *O*(*H*), are calculated as the probability of guilt divided by one minus the probability of guilt (i.e., innocence). Now suppose that we have evidence, *E*, that changes the probability of guilt. For example, it may be determined that a latent print from the scene matches the defendant's fingerprints. The probability of guilt is revised and the odds, *O*(*H*:*E*), can be recalculated. We read *O*(*H*:*E*) as the odds in favor of *H* given *E*. The change in odds from *O*(*H*) to *O*(*H*:*E*) is a measure of the value of the new information, and is expressed as a likelihood ratio, which we designate as $LR_{H:E}$:

$$LR_{H:E} = \frac{O(H:E)}{O(H)} \quad (3)$$

$LR_{H:E}$ is therefore a measure of the probative weight of the item of evidence, *E*. By definition, likelihood ratios are always greater than zero. In the context of this article, a likelihood ratio greater than one is favorable to the prosecution and a likelihood ratio between zero and one is favorable to the defense.

Bayesian Network

A Bayesian network is a combination of a graph showing relationships between variables and probabilities describing the strength of relationships. The graph shows variables as nodes with directed arrows (edges) connecting nodes to reflect direct relationships. Within a Bayesian network, a link between *X* and *Y* can be written as *X* —> *Y*, where *X* is called a *parent* of *Y* and conversely, *Y* is a *child* of *X*. The link between *X* and *Y* should not be interpreted as a causal relationship between two variables; rather it means that our belief about *X* influences our belief about *Y*.

Figure 1 shows the network developed on the basis of the key evidence presented at the first trial.[6] It has three fragments. The first is on evidence as to whether Bloodsworth met Dawn by the pond and left with her; the second is for the shoe pattern comparison; and the third is the testimony of three defense witnesses.

The second fragment (nodes G and H) is for the comparison of the tennis shoes found by investigators in Dawn Gerald's home against the herringbone-pattern marks found on Dawn's body. From the viewpoint of the network, belief about whether there is a match influences our belief on whether Bloodsworth is guilty. Evidence about the match was provided by FBI analyst William Heilman who testified that while there was not enough of a body mark to compare it with an entire shoe sole, the portions of the body mark that were visible corresponded to areas of the shoe soles. He could not say whether the marks were from the right or left shoe, and could not conclude that they were made by these specific shoes. The final fragment (nodes I, J, and K) represents the testimony for the defense by Wanda Bloodsworth, Birdie Plutschak, and Dawn Gerald. Each testified that Kirk Bloodsworth was at the house on the morning of July 25, 1984, and therefore could not have committed the murder.

[6] The network in this presentation was developed with a software package called Hugin. A free demonstration version of the software was downloaded from www.hugin.com for this purpose.

Their testimony directly relates to whether Bloodsworth was the offender and is therefore shown as connected to the root node.

Bayesian networks require the development of conditional probability tables for each node based on the connections with its parents. Table 1 shows the conditional probabilities developed by the authors for this presentation. With the conditional probabilities in place, the network can be initialized to determine the probabilities for each node. Figure 2 shows the results of the initialization. The figure shows, for example, that the probability that Kirk was near the pond (node E) at 5:45 a.m. is 37% and the probability that he met Dawn at the pond is 18%. The probabilities of the prosecution witnesses on identification of Bloodsworth are 33% for Chris Shipley; 27% for Jackie Poling; and 28% for James Keller. On the defense side, the probability on the presence of Kirk Bloodsworth at home is 96% for all three defense witnesses (Wanda Bloodsworth, Birdie Plutschek, and Dawn Gerald) since they were assigned the same conditional probabilities. Finally, the probability of the shoe pattern match is 42% and the probability associated with the testimony of the FBI analysis on the pattern match is 46%.

At this point, we can estimate the probability of guilt by accepting the testimonies of witnesses for the fragments. For the testimonies of the prosecution's witnesses, the probabilities of correct identification are changed to 1.00 for Chris, Jackie, and James. The result is that the probability of Bloodsworth's guilt increases from 20% to 92%. Thus, the model indicates that without any other evidence, the probability of his guilt is very high—at a point that most would consider it guilt beyond a reasonable doubt. The probative weight of the testimonies, as measured by equation (3), is

$$LR_{A:C,D,F} = \frac{.92}{.20} = 46.0 \qquad (4)$$

that we read as the probative weight derived from the testimonies of the three prosecution witnesses.

However, there is the testimony of the FBI analyst, William Heilman, and the three defense witnesses to consider. Considering only Heilman's testimony, a change in the probability of node *H* to 1.00 to indicate acceptance that the shoe patterns match leads to a probability of guilt amounting to 38%. That is, the forensic evidence increases the probability of guilt although it remains below would most would consider beyond a reasonable doubt. Equation (3) gives a probative weight of this evidence as $LR_{A:H}$ = 2.5.

Finally, we can accept the testimonies of the three defense witnesses and see their impact on guilt. Changing the probabilities for nodes I, J, and K to 1.00 for accepting that Bloodsworth was at home gives a value of 11% for the probability of guilt. Thus, their testimonies by themselves reduce the probability of guilt from 20% to 11%, thereby favoring the defense. The probative weight is calculated to be $LR_{I,J,K}$ = .49.

The most important evidence, as reflected by the probative weights, is the testimony of the three witnesses on stating that Bloodsworth was at the pond. The testimony on the shoe patterns and the defense witnesses carried considerably less weight.

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Table 1: Initial Conditional Probabilities

Node	Probability	Explanation
P(A=Yes—Bloodsworth assaulted Dawn Hamilton in woods)	.20	We start with a 20% probability that Bloodsworth is guilty. The odds are then .25, which indicates an moderately low probability of guilt.
P(B: Bloodsworth met Dawn by pond and left with her | A)	.90	If Bloodsworth is guilty, we assign a high probability that he met Dawn by the pond
P(B: Bloodsworth met Dawn by pond and left with her | ~A)	.0001	If Bloodsworth is not guilty, we assign a very low probability that he met Dawn by the pond .
P(C: Chris identifies Bloodsworth | B)	.90	If Bloodsworth met Dawn by the pond, we assign a high probability that Chris identified him.
P(C: Chris identifies Bloodsworth | ~B)	.20	If Bloodsworth did not meet Dawn by the pond, there is still a possibility that Chris identifies him.
P(D: Jackie identifies Bloodsworth | B)	.60	If Bloodsworth met Dawn by the pond, we assign a lower probability that for Chris that Jackie identifies
	.20	him.
P(D: Jackie identifies Bloodsworth | ~B)		If Bloodsworth did not meet Dawn by the pond, there is still a possibility that Jackie identified him.
P(E: Kirk was near pond at 5:45 | B)	.90	If Bloodsworth met Dawn, we assign a high probability that he was near the pond earlier that
P(E: Kirk was near pond at 5:45 | ~B)	.25	morning If Bloodsworth did not meet Dawn at pond, there is still a possibility he was near the pond earlier that morning.
P(F: James saw Kirk | E)	.75	If Bloodsworth was near pond at 5:45, we assign a fairly high probability that James saw him as he was
P(F: James saw Kirk | ~E)	.00001	driving by. If Bloodsworth was not near pond, it would be virtually impossible for James to have seen him as he was driving by.
P(G: Shoe pattern matches Dawn's injuries | A)	.90	If Bloodsworth is guilty, there is a high probability the patterns match.
P(G: Shoe pattern matches Dawn's injuries | ~A)	.30	If Bloodsworth is not guilty, there is still a possibility that the patterns match (depending on the sales of this type of shoe)
P(H: Analyst testifies there is a match | G)	.95	If a match actually exists, there is a high probability that the analyst will testify that a match was
P(H: Analyst testifies there is a match | ~G)	.10	determined. If a match does not exist, there is a lower probability that the analyst will testify that a match was determined.
P(I,J,K): Wanda, Dawn G., and Birdie testify that Kirk was home | A)	.80	If Bloodsworth is guilty, the three defense witnesses may still have said he was home because of their
P(I,J,K): Wanda, Dawn G., and Birdie testify that Kirk was home | ~A)	1.00	close relationship to him. If Bloodsworth is not guilty, the three defense witnesses would definitely testify that he was home.

Figure 1: Network for First Trial

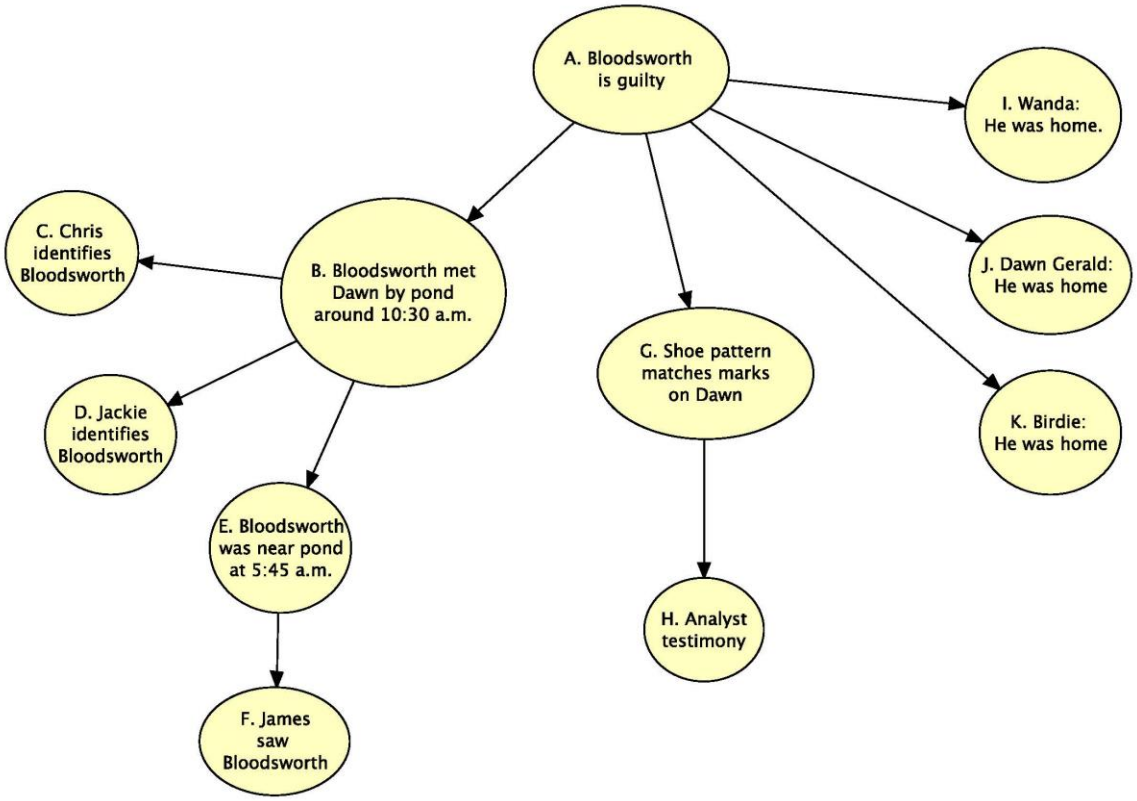
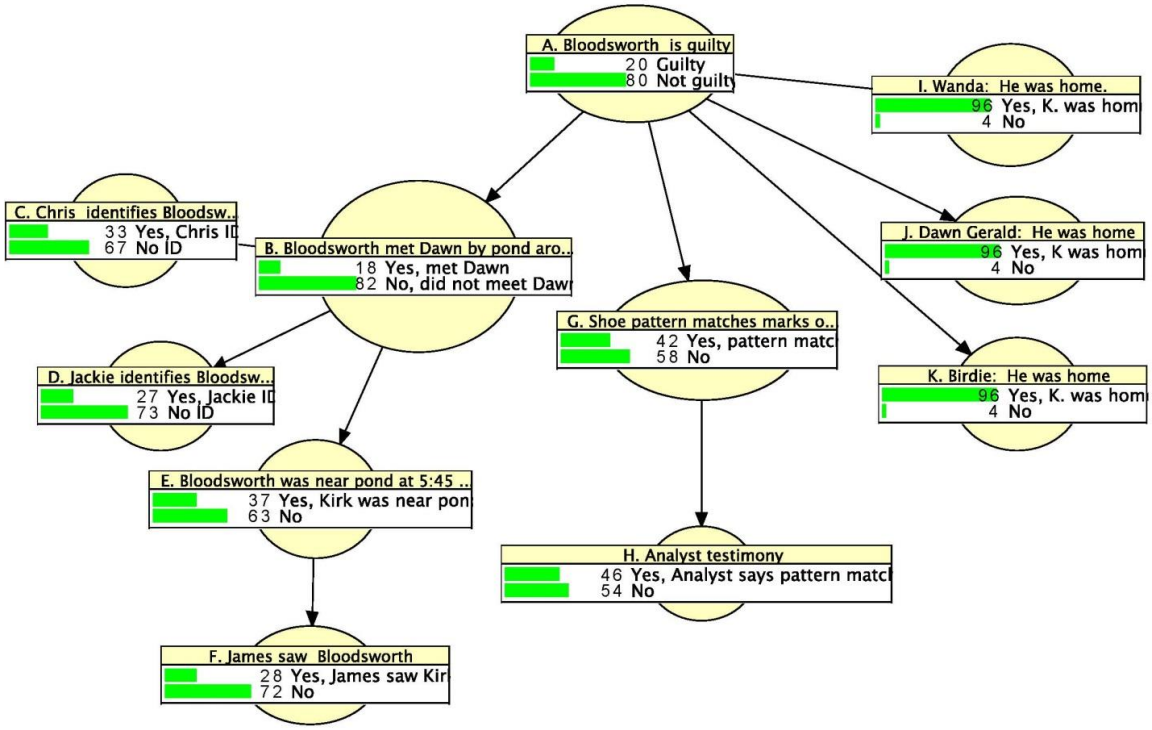


Figure 2: Initial Probabilities for Network



Homicide Investigation Research. Transatlantic Perspective

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Abstract

The two parallel ongoing projects on homicide investigations effectiveness conducted in Poland (since 2012) and US (since 2014) are to determine what kind of law enforcement actions are later leading to clearing the case, finding the responsible person and gathering sufficient evidence for the prosecution. Conducting the research in both Europe and America is to allow identifying universally effective investigative actions. The legal, cultural and geographical differences are taken into account. However investigative work, CSI and forensic psychology act in accordance with the rules of the physics, chemistry, biology, medicine, sociology, and – last but not least – psychology.

Summary

1. Objectives

The main objective of the projects is to identify factors which aggravate and facilitate successful homicide investigations. That includes both most effective investigative actions as well as the most frequently committed mistakes in the course of murder investigations. It will allow developing an algorithm for effective actions of the law enforcement agencies applied to in cases when the suspicions of committing murder occur.

2. Main research questions:

1. *What are the most effective law enforcement officers' actions that lead to solving homicide cases?*
2. *What are the ineffective and indifferent law enforcement officers' actions (not leading to solving homicide cases or even hindering it)?*
3. *What kind of investigative activities increase the chance of successful prosecution of the real perpetrators?*
4. *How the evidence based knowledge may be transferred into useful algorithm of investigative actions?*

The Polish studies addressing the problem of the investigative actions in murders cases date back to the sixties and seventies (Horoszowski 1966; Hołyst 1970; Gurgul 1977). They were also limited in their scope – while addressing the law enforcement concerns, they were not based on the research results. More recent publications, where the well-established research methods were finally adopted, only partially covered the issue by focusing mainly on forensic techniques used at the crime scene (Całkiewicz 2010a) or on usage of the existing databases for linking crimes (Całkiewicz 2010b).

In the publicized research a lot of the attention is mostly on the individual perpetrator, his psyche and motives of action (Holmes, Holmes 2010). Despite the impression of wealth in this field in literature theme effectiveness of investigations is normally limited to the presentation of theoretical assumptions that are supported by examples of mistakes made in the course of specific investigations. This applies both to classic works (Geberth 2006; Walton 2006; Rapp 1989), but also to research approach studies delivered with the assistance of the leading police forces and think-tanks, such as Police Executive Research Forum or Federal Bureau of Investigation (ACPO 2006; Cronin 2008). In the published literature there is no comprehensive information on studies dealing with homicide investigation effectiveness. This leads to a situation, where most law enforcement agencies need to develop and implement their own approaches to handling the major cases investigations, which rely solely on their own work experience.

Partially that gap has been filled in by the recent studies that were focusing on the agencies with the highest clearance rates (Carter 2013, Carter & Carter 2015). Thanks to them several organizational characteristics that correlate to high clearance rates (over 80%) have been identified. However there is still missing the research that focus solely on the detectives' actions during first 48-72 hours and how they affect clearing the case.

Some of the studies (Keel 2008; Maguaire, King, Johnson, Katz 2010) focus on analyzing statistical data using really big databases. The main findings so far, while still controversial, identify correlation between race and age of the victim and the solvability chance (Keel, Jarvis, Muirhead 2009). However those are independent variables – detectives can only take them into assumption. The projects are to change that situation by delivering scientifically-tested support for the investigators.

The law enforcement agencies investigative practices have rarely been subject of a scientific research. Empirical cognition of that subject, despite its great social importance is therefore (still) relatively limited. In addition, the perception of the actually applied investigative methods is affected by how the popular culture presents them. Even the public statements made by representatives of the scientific community prove the existence of CSI syndrome (Lawson 2009), who often relies rather on hearsay information or beliefs rather than on the results of the (missing) scientific studies.

On the other hand, sharing of the expertise and know-how of the experienced practitioners from law enforcement agencies is often limited by a confidential nature of their work. Therefore, the both projects ensure anonymity of both to the participating officers and to interviewed experts.

The individual experience of the practitioners is usually gathered randomly, since they focus on issues which they had personally faced in course of their own work. This means that the information possessed by them may not be sufficiently accurate to properly describe the particular phenomenon. Another example of a discrepancy between theory and practice is the common misunderstanding of the basic terms, such as crime detection or crime clearance. Crime clearance, used in practice of many law enforcement agencies, sometimes indicates only

that there is a suspect in a specific case. Such an approach does not require for this purpose to arrest the suspect or to charge him/her with a specific crime, not to mention sentencing by a court. Even in the same country different agencies define detection and crime clearance in their own specific way. The gap becomes even wider if one takes into account that there is also no universally recognized definition of 'detection' which would allow to appropriately compare work of law enforcement agencies in different countries. Confusions in the definitions are addressed by preparing definition proposals.

Limited research activities and empirical studies concerning the practices of the law enforcement agencies are also due to difficulties in conducting such studies. Law enforcement agencies are very closed institutions - reluctant (also for legitimate reasons) to share with outside people. This is true even in the countries with established transparency rules of public authorities' actions. Additional constraints arise in situations when the research is focused on identifying certain anomalies or failures. Unsolved or wrongfully solved cases are often labeled in such a way, which results in additional resistance to the researchers.

The crime and fear of crime decrease the standard of living in the modern world (Newburn 2007). The killings are the most moving example of breaking generally accepted cultural and legal norms, regardless of the fact that the probability of becoming a victim of a homicide is statistically low and there is a declining trend in the number of offenses registered in the Polish police statistics (1048 in 1999, 662 in 2011). Worldwide average rate of intentional homicides was in 2011 6.6 per 100.000 inhabitants. That is 6 times higher than in Poland, but global trend seems to be decreasing – from 7.4 in 2004 (UNDOC 2012). The dark figure of murders includes such categories as: missing persons, or whose bodies were not found or properly identified, cases wrongly classified as, accidents, natural deaths or suicides. Repeated cases in which false qualifications death's causes is present suggest that there is a sphere of unknown number of cases where the perpetrators are not even sought. It could partially be caused by errors from the investigation phase.

Statistically high clearance rate of these crimes in Poland (94.7% in 2011) relates only to linking suspects to specific events, but not to indictments or convictions for those offenses. Next stages of criminal proceeding reduce significantly those rates, however that fact is not reflected by the police statistics. Such trend illustrated by an inverted pyramid is however present in most countries and refers to most crimes (Newburn 2007). Among the main reasons of this decline are errors committed in the course of the investigation. The chance to disclose forensic evidence and identify witnesses irreversibly declines with each day passing from the day of the crime committed. Crime scene investigation, despite a legal possibility of the repetition is virtually unrepeatable. After its completion, it is difficult to rely on the disclosure of new evidence. Actions undertaken at the early stages of homicide investigations result in the insufficient evidence in the light of the principles of law and the criminal process. That often is equal with a withdrawal from an indictment or in the case of a referral – acquittal. Many examples of media publicized acquittals of people who in the common perception were guilty decrease trust of the public in the law enforcement apparatus and criminal justice system. At the same time it increases a public fear of crime and sense of impunity among potential and actual perpetrators. As a total failure are considered law enforcement cases in which for a long

time detectives have been failing to collect evidence in the course of investigation that would allow to establish the truth during the trial (known as cold cases).

The main reason for high (statistically) detection in homicide cases in European countries is, unlike in North America, the existence of the bond linking the perpetrators to the victims,. Murders are usually committed in the family or acquaintance circle, when under the significant impact of alcohol or other substances unresolved conflicts and unhealed injuries result in a violent quarrel, and later murder. The perpetrators of such acts to a large extent report themselves to law enforcement authorities, but even if they do not, solving such cases in unproblematic. Such cases are labelled as "killings" or "dunkers" what distinguish them from "murders" or "whodunits" when the ID of perpetrator is hard to determine (Simone 1993; Pucket, Lundman 2003). Existing research rises big concerns also on solving "dunkers". Innocence project (Innocence Project 2012) gathers data on leading causes of wrongful convictions: eyewitness misidentifications testimonies, improper forensic science evidence (Garret, Neufeld 2009), and false confessions. There are indications that more than 3% convictions in serious cases are wrongful (Wrongful convictions 2012). The both projects aim is to deliver solution which will help to identify and prosecute real perpetrators – Effective homicide investigation manual.

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Panel Session 3 - Homicide Investigation and Prosecution

Chair: Chris Rasche – Recorder: Trisha Whitmire

Recorder Notes:

Exploring Recent Trends in Police Responses to Homicide, Violence, and Property Crimes
Tim Keel & John Jarvis

Becky Block: Do you have data on the organization of the department? I like the clearance rates; don't call it error. When the two differ, could you control for the separateness of the departments?

John Jarvis: We don't have all of that information on the departments.

Tim Keel: We have some from the questionnaire in 2008. We would need to know if it changed.

Becky Block: Could you separate it out?

John Jarvis: We could see which ones have separate departments.

Vance McLaughlin: I found that cases were unsolved when investigators were moved around and they weren't sharing information. I also found that they were changing the definitions.

Tim Keel: I gained a lot of insight by talking to every homicide investigator.

Tom McEwan: Take a look at the study in 2008 and see how it was done.

John Jarvis: The results from 2008 to now didn't vary much.

Dallas Drake: The easy to solve crimes are when the offender leaves the weapon at the scene. Others are harder. Did you look at the complexities of the crime?

John Jarvis: We didn't have all of that information about each of the crimes.

Jessie Holton: Organizations are each created differently. It would be effective to look at how they are organized to see what works best.

John Jarvis: We looked at how agencies solved property crimes versus homicides to see how they compare.

Amber Scherer: I know you're using old data, but do you want to expand this to agencies that have less than 25 homicides a year?

Tim Keel: We alleviated them but we can look at them again. We wanted the data to be pure.

John Jarvis: Many agencies have 10 or fewer officers.

No additional questions or comments.

An Examination of Investigative Practices of Homicide Units in Florida
Richard Hough, Kim Tatum, & Jonathan Alcover

No questions or comments.

Guilt, Evidence, and Probability
Tom McEwan & Wendy Regoeczi

Chris Rasche: Is this the kind of thing a prosecutor or defense attorney could use to calculate the chances of success?

Tom McEwan: Yes. It forces you to look at the strength of each piece of evidence and consider what's good about it and what's bad about it. There is a possibility it could be very useful in that sense. It takes a lot of time but could be beneficial and avoid false convictions.

Dick Block: This kind of analysis is dependent on priors. The priors are often dependent on past experience. Could you use older cases where there was a conviction or not to develop it? Essentially you arbitrarily follow the priors.

Tom McEwan: The probative values won't change because they're a ratio of two odds. The other part is correct. The investigator, the priors, the background, could help to develop it.

Dick Block: You could use cases with different types of evidence.

Tom McEwan: Yes. You could use some with only DNA.

Dick Block: Do you know if that has ever been done?

Tom McEwan: Most of the publications on this are around the year 2000. There hasn't been much done on this in the last 15 years.

Chris Rasche: What about the tendency of jurors to assume the government knows what it's doing? They go in believing the person was arrested because they are guilty.

Kim Davies: You might have to change those assumptions by county. Some trust government and others don't.

Chris Rasche: Absolutely, yes.

Kathleen Heide: I'm just curious. This guy had nothing to do with it. The defendant is not guilty based on DNA. How did police end up targeting this man?

Tom McEwan: He came to their attention because he wasn't at work that day and he was arguing with his wife. When the composite came out Chris said that looked like the guy and that sealed it.

Kathleen Heide: Were the victim and Bloodsworth the same race?

Tom McEwan: Yes.

Tim Keel: Bloodsworth and the perpetrator could have been brothers. There's also the possibility he was there and watched and walked away. There's a bit more to the story.

Dick Block: This reminds me of the research that was done on juries where they use real cases and choose juries to see the outcomes.

Chris Rasche: Are you talking about mock juries?

Dick Block: No they weren't mock juries. They were chosen juries shown artificial cases. The idea was for lawyers to get a look at the things that would get a conviction or not. They eventually manipulate the jurors to get the desired result they wanted. They were essentially doing this kind of thing. They were concerned with extra judicial characteristics. Is it a male? Is he black? Is he young? They were manipulated by the extra judicial characteristics.

Chris Rasche: I thought that is what jury consultants do.

Dick Block: They do but they don't understand this type of analysis. They understand basically nothing about statistics.

No additional questions or comments.

Homicide Investigation Research: A Transatlantic Perspective
Pawel Waszkiewicz

Adam Pritchard: I really appreciate what you're trying to do. I think it's really interesting and anytime I see this cross-national research on structural things like this I get really excited about it. One issue you might want to think about would be demographic contextual differences. Even within the United States if you look at different regions you will have different demographics and you wouldn't be able to say one region is representative of the entire United States. Poland is a more homogenous society. As you move forward I would suggest looking at differences in cultural norms, law, history, and traditions to see which models would work best

for various groups. I'm always skeptical of an approach that tries to have a one-size fits all model for the entire world.

Pawel Waszkiewicz: We are trying to find those that are universal. We can find some features that are more general. Even when you look at individuals everyone thinks they are exceptional, but they each have features that are similar.

Adam Pritchard: I do appreciate what you're trying to do. Ecological context matters too. I'd be remised not to point this out; it'll be hard to approach police departments and agencies to talk about the mistakes they've made. That might just be a semantic thing. When you frame it as we want to identify all of your mistakes they may not like that, but if you frame it as you can do better you might have a better chance.

Pawel Waszkiewicz: We won't approach them with a list of their mistakes.

Vance McLaughlin: In one way you're lucky because you don't have any procedures or manuals. You can start with best practices. One thing I would suggest, my experience has been in getting use of force reports from agencies. One thing that's more subtle is the training, the manual, the form, and there is a way to nudge them towards best practices. I would want to know questions such as: did you arrive in uniform or plain clothes? What were your exact words? Verbalization is important. It's subtle but it keeps reminding the officer what we would want them to do.

Pawel Waszkiewicz: Case files differ in their documentation. Some you can't even find who was present at crime scenes.

Dick Block: I'm not sure if this question is appropriate. The relationship between the police, the prosecutor, and the court seems to shape the kind of data and the kind of evidence that was collected. In Holland there was a really different relationship between the prosecutor and the police than there is in the United States. I don't know how the relationship is in Poland so I'd like to know more about how police relate to the other parts of the legal system.

Pawel Waszkiewicz: In Poland the District Attorney is in charge of the investigation. He gives instructions to the police and he is present at the crime scene and autopsy. That is the main difference. They go to ones that aren't even their case. Unfortunately, in my opinion, this year the direction is moving more towards the United States. We don't know what will happen due to this change. The DA is a part of the investigation which brings its' own problems.

Dick Block: As it stands now we usually call our system adversarial which contracts the French system, which is not adversarial. The idea is not to win the case but to judge the evidence.

Chris Rasche: Inquisitorial. Those are the two terms: adversarial versus inquisitorial.

Pawel Waszkiewicz: It's changing. There are some people who think some evidence is not legally obtained. There is an ongoing debate because the new system starts on July 1st. Prosecutors, police, and several other groups are trying to stop the change to the new system, or postpone it at least. On July 1st many will boycott the new system.

Michael Becker: That may even significantly impact the clearance rate. Because of our adversarial system there is quite a bit of evidence that doesn't get to the prosecutor. Cases where the investigating officers are fairly confident in their suspect may sit and can impact the clearance rate.

Pawel Waszkiewicz: That is scary. Even in the United States I found very different approaches between agencies. One policy I came across in the U.S. was one eyewitness, while others required two or even three to prosecute. In the same legal system the process differs dramatically.

No additional questions or comments.

Panel Session 4: ***Subtypes of Homicides***

Chair: Lin Huff-Corzine – Recorder: Mindy Weller

A Preliminary Analysis of Correlates of Child Homicide Victimization Using the National Violent Death Reporting System, 2005-2012

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Abstract

This presentation is a preliminary analysis of the patterns and circumstances of homicide victimization for children aged 0-14 years using data from the National Violent Death Reporting System (NVDRS) for seventeen states from 2005-2012. I examine population-based risk of homicide victimization by the child's developmental age group - infant (newborn to 11 months), toddler or preschooler (12 months through 4 years), primary school age (five through nine years), and middle school age (10 through 14 years), and the risk for boys versus girls. Additionally, the presentation examines differences in a number of aspects of the homicide situation or circumstances by the child's developmental age, summarizing the key circumstances under which children in that age group are murdered.

Disclaimer: The findings and conclusions of this study are those of the author alone and do not necessarily represent the views of the Centers for Disease Control and Prevention or of participating NVDRS states.

Homicide continues to be a leading cause of death for children under the age of 14 in the U.S.(NCIPC 2015). In 2013, Homicide was the 13th leading cause of death in the U.S. for children under age 1; the third leading cause of death for 1-4 year olds; the fourth leading cause of death for 5-9 year olds; and the fifth leading cause of death for 10-14 year olds (NCIPC 2015). Although all homicides are horrific, the risk of homicide among our young is a concern for law enforcement, medical and public health practitioners, social workers, and the public. Using data from the National Violent Death Reporting System (NVDRS) for seventeen states for the years 2005-2012, this presentation is a preliminary exploration of the risk factors in child homicide. I present the population-based risk of homicide victimization by the child's developmental age group - infant (newborn to 11 months), toddler or preschooler (12 months through 4 years), primary school age (five through nine years), and middle school age (10 through 14 years), and the risk for boys versus girls. Additionally, this presentation examines differences in a number of aspects of the homicide situation or circumstances by the child's developmental age, summarizing the key circumstances under which children in that age group are murdered.

LITERATURE REVIEW

Previous research has posed many questions that remain to be answered in order to prevent child homicide. Changes in trends over time (increases or decreases) may indicate areas of concern or successful prevention/intervention. For example, has the risk of victimization changed over time by developmental age group? Has the risk for boys or girls increased or decreased over time?

In order to intervene, we need to know what age groups are at specific risk from what types of offenders. Knowledge of patterns of the victim-offender relationship may allow prevention efforts to be aimed at specific groups. For example, are girls and boys subject to risk from different kinds of offenders, and does this change as they grow through the infant to middle school years? Are young children of different ages more at risk from male or female offenders, and does it matter whether or not the offender is a caretaker? What kinds of situations or circumstances are most prevalent for different child victim groups? Are boys more at risk than girls of being killed in a gang-motivated homicide? Are girls more at risk than boys of being killed in a sexual assault homicide? Are boys and girls, infants and older children, equally at risk of being killed during a domestic assault on their parent, and does this change with developmental age?

Child homicide is best understood in relation to the developmental stages of childhood (Finkelhor1997). The circumstances, weapon type, and gender ratios for homicides of children differ with the child's developmental or life-course stage, such as infant, toddler or preschool, primary school age, and middle school age (Alder and Polk 2001; Finkelhor and Ormrod 2001; Chew et al. 1999; Crittenden and Craig 1990; Christoffel, Anzinger and Amari 1983; Jason, Gilliland and Tyler 1983). Because of physical dependency on adults, most infant and pre-school age homicide victims are killed by parents or caretakers in fatal situations of child abuse, physical punishment, or neglect (Alder and Polk 2001; Smithey 1998; Finkelhor 1997; Crittenden and Craig 1990), whereas middle school age children are less likely to be killed by a

caretaker and more susceptible to lethal street violence (e.g., Finkelhor and Ormrod 2001). Children under the age of five are at greatest risk of fatal child abuse, with infants bearing the brunt of this burden – 41% of all fatal child abuse deaths (McClain et al. 1993).

The high rate of child homicide in the United States is not new, having increased three-fold from 1950 to 1994 (National Center for Health Statistics 1995). Juvenile homicide victimization rates increased rapidly during the late 1980s and early 1990s, decreased in the early 2000s and have remained relatively stable since then (ChildTrends.Org 2015; NCIPC 2015; Finkelhor and Ormrod 2001). Attempts to explain changes in the rate of child homicide (e.g., Zahn and McCall 1999) have explored differences among children by gender and developmental age group. For example, Gartner (1991), in her examination of child homicide across 17 developed nations from 1965-1980, found that trends in victimization risk differed for infants and 1-4 year olds. While the rate for infants decreased over the study period, the rate for 1-4 year olds showed a small but steady increase. For post neonatal children (aged 28 to 364 days), mortality rates for intentional homicide increased sharply between 1980/81 and 1993/4, from 3.6 to 4.9 (an increase of 3.2% per year) per 100,000 live births for white babies and from 11.3 to 17.1 (an increase of 3.8% per year) per 100,000 live births for black babies, even though the mortality rates from other causes (birth defects, infections, or other injuries) all declined during the same period (Scott et al. 1998). Paulson and Rushforth (1986), in their study of child homicide in Cuyahoga County, Ohio from 1958 to 1982, identified a steady increase in the risk of homicide victimization over the study period for both 0-4 year olds and 10-14 year olds. For 5-9 year olds, however, rates rose until the mid-1970s and then dropped off, creating a much more erratic trend.

Minority children suffer from higher levels of victimization than do non-minority children. African American children in all developmental age groups have higher rates of victimization (Lord et al. 2002; Finkelhor and Ormrod 2001). Studies have also found that the population-based risk of being murdered is almost equal for infant boys and girls, but that there is an increasing gender gap as children grow older (Alder and Polk 2001; Boudreaux, Lord and Jarvis 2001; Finkelhor 1997). The proportion of boy victims to girl victims increases with the child's age. Boudreaux and colleagues tie this phenomenon to differences in socialization, maintaining that gender role expectations and the resulting differences in routine activities of childhood explain differences in victimization risk for boys and girls as they grow older (Boudreaux et al. 2001).

Research has identified a variety of causative factors associated with the homicide of young children. Copeland (1985), in an examination of homicides in children aged 12 or younger in Metro-Dade County from 1956 to 1982; found that 45% of all cases could be attributed to fatal child abuse. Copeland (1985) defined cases as "child abuse" if they involved cases with a history of abuse recorded by Child Protective Services or cases of injury that did not match the initial rationale given for the injury. In this study, over 91% of fatal child abuse victims were age three or younger, with boys (62%) being victimized more often than girls were. In child abuse cases, almost 72% of the perpetrators were parents, stepparents, or boyfriends of the mother. In non-child abuse homicide cases, Copeland found that only 38% of victims were age three or younger, with 11% aged 9 or 10. Non-child abuse homicide victims

were almost equally male or female. Non-family members accounted for 68% of the known perpetrators in non-child abuse cases. Young children are also at risk of victimization in circumstances of intimate partner violence, often as innocent victims or pawns in a display of power by one adult partner over another.

As children grow older, they are less vulnerable to abuse, because they become increasingly able to communicate their needs verbally, escape, or live through physically abusive situations (Finkelhor and Ormrod 2001). When children enter school, they are protected in some ways from victimization at the hands of parents and caretakers, but their risk of harm from strangers and peers increases (Finkelhor and Dziuba-Leatherman 1994). School age children are at greater risk of sexual assault homicide, gang-motivated homicide, and homicide by mentally ill offenders (Lord et al. 2002; Finkelhor and Ormrod 2001).

METHODS

The NVDRS is a surveillance system of the Centers for Disease Control and Prevention that collects data on violent deaths (suicides, homicides, and unintentional firearm-related injury deaths) (Paulozzi, Mercy, Frazier Jr. et al. 2004). As of 2014, 18 states participate in the program, Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, Michigan, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin (CDC 2015). The NVDRS is an incident-based reporting system that collects information from death certificates, law enforcement reports, and coroner/medical examiner reports. Several states also collect information from additional sources such as child fatality review teams, supplementary homicide reports, hospital data, and ATF data on firearms and explosives (Parks, Johnson, McDaniel et al. 2014). The NVDRS potentially collects data on 250 unique variables (not all states collect data on all variables), including the manner of death, demographic variables for victims and suspects, location, time of injury, weapon/injury type, precipitating circumstance variables, and victim-suspect relationship. Data are coded by trained coders who assess source documents for inconsistencies using a hierarchy rule for each variable, where primacy is based on the "assumed reliability of all the sources for a single variable" (Parks et al. 2014:4). For the current study of young child homicides, it is important to note that in the NVDRS, homicide is "defined as a death resulting from the use of physical force or power, threatened or actual, against another person, group, or community when a preponderance of evidence indicates that the use of force was intentional" (Parks et al. 2014:4). In addition, the NVDRS includes two forms of death regarded as homicides by the National Center for Health Statistics, arson deaths regardless of intent and stabbings regardless of intent. Several types of death are excluded such as vehicular homicide without intent to injure, and deaths of unborn fetuses. Fetuses who are delivered as live births and later die as a result of injuries while in utero (for example after the mother has been beaten and killed) *are included* as homicide deaths.

For the current study, restricted access NVDRS data on abstractor assigned homicides for a total of 17 states, 16 states with data collected for 2005-2012 (Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, New Jersey, New Mexico, North Carolina, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin) and data for one state

(Ohio) for the years 2011 and 2012 were analyzed (CDC 2014). The restricted access dataset includes access to brief coroner/medical examiner (C/ME) and law enforcement (LE) narratives that are very useful to researchers.

For this descriptive analysis I selected from the 35,551 victim records in the NVDRS, child victims aged 14 or younger, excluding 19 cases of victims aged 14 or under during the study period who were injured prior to 2003. This "young child" dataset includes records for 2232 homicide victims from newborns to children aged 14. Table 1 shows the child victims by their individual ages, within gender and racial groups.

I classified these children into four developmental age groups — infant (newborn to 11 months), toddler or preschooler (12 months through 4 years), primary school age (five through nine years), and middle school age (10 through 14 years). The groups were chosen because they correspond to groups commonly used in the literature, and because empirical analysis of individual ages found consistent similarities in victim characteristics and trends over time within the four categories and sharp differences across categories.

For annual population-based victimization rates, however, I combined the two oldest developmental age groups (primary and middle-school age children) into a larger category of children aged 5-14, because annual counts had fewer than 20 cases for many of the years, making the rates unreliable.

Variables Used in the Analysis

The NVDRS contains over 250 variables with detailed information about the victim, the suspect, their relationship, and the homicide circumstances. Variables from the NVDRS dataset included in the analysis were selected because of their importance in previous literature on young child homicide. The variables selected are: victim characteristics (Victim Sex, Victim Race, and Victim Ethnicity,); characteristics of suspect #1 (Suspect #1 Age, Sex of suspect#1, Race of suspect#1, Ethnicity of suspect#1, Victim to suspect#1 relationship, Does Suspect#1 Have a history of abusing the victim, Was suspect#1 mentally ill, Did suspect#1 attempt suicide); and circumstance variables (Was the death caused by abuse, Weapon type, Type of personal weapon used, Did the injury occur at the victim's home, Circumstance: drug involvement, Circumstance: other crime in progress, Circumstance: intimate partner violence). In addition, three variables were created by the author to examine specific child homicide incident characteristics (Was the incident a neonaticide, Was any suspect a caretaker, Number of suspects, Gender of all suspects in the incident). Tables 1-4 provide frequencies by developmental age group for all the variables used in the analysis.

Created Variables

In order to examine several characteristics of the homicide incident that are particularly relevant to young child homicide, I created several enhanced variables based on the narratives available in the coroner's/medical examiner's and law enforcement narratives. Using a process

of case-by-case review of the C/ME and LE narratives and relevant variables already included in the dataset, the three variables were created.

Neonaticide. By examining the age of the victim variables available in the NVDRS (age by year, days or months) and the C/ME and LE narratives and cause of death narratives, I coded all deaths of newborn victims killed in the first 24 hours of life as "1=Yes", and "0=No" for all other cases in the young child homicide dataset.

Children Killed by a Caretaker. The NVDRS includes a variable that indicates whether the victim was killed by suspect #1 while they were in a caretaking role (CareGiver1). However, this variable only provides information on the first suspect in the homicide. In order to examine the relationship of all suspects who might have been taking care of the child during the homicide incident, I created the variable "Was any suspect a caretaker?" In a case-by-case review of the C/ME and LE narratives of all 2322 child homicides, I determined whether the homicide involved a caretaker and the relationship of the suspect(s) to the victim. Many children, for example, were killed by an "acquaintance" who, according to the narrative, was watching the child. Often relatives (grandmothers, uncles, aunts, brothers, sisters) were caring for the child at the time of the homicide incident. To clarify this key aspect of the homicide situation, I created a "Was any suspect a caretaker?" variable (see Table 4), to indicate whether the victim was killed by a suspect or suspects who was caring for the victim at the time of the fatal incident. A child is killed by a caretaker when the offender, or at least one of multiple offenders, had primary or temporary responsibility for the child's physical well-being at the time of the fatal incident.

Specifically, the variable "Was any suspect a caretaker" was coded "yes - natural parent" (children killed by a mother or father), "yes - other parent" (children killed by a step-parent, foster parent, or parent's boyfriend or girlfriend), "yes - other caretaker" (children killed by a babysitter, other relatives or any non-parental caretaker), or "no".[i] For victims killed by multiple offenders (more than one suspect discussed in the narratives), the closest relationship governs the specific type of offender caretaker. For example, a child killed in the crossfire of a confrontation between his father and an acquaintance where the child was killed by a bullet from his father's handgun would be coded "caretaker - natural parent".

Though being killed by a caretaker and being killed by child abuse (a causative factor) often occur together, they are not the same thing. Many definitions of child abuse require a series of abuse events, but "caretaker" does not. For example, a parent who has not previously hurt the child but suddenly kills the child in a domestic dispute would meet the "caretaker" criterion, even though "child abuse" might not have been recorded on the abused child variable. In addition, it is not necessary that the caretaker had any earlier contact with the victim. For example, a person who murders a child while babysitting is the child's "caretaker" at the time of the incident, even if the person has never previously cared for that child.

Multiple Offenders and Victims in the Homicide Incident. All victims meeting the age criteria are included in the data analyzed here, regardless of the number of victims or the number of offenders in the homicide incident. In order to examine similarities and differences

in cases where there was more than one suspect in the homicide incident I created two variables. The variable "Number of suspects" indicates the number of suspects reported on the C/ME and/or LE narratives. The "Number of suspects" variable was coded 0=one suspect and 1=two or more suspects. Although the NVDRS collects information on multiple suspects, I was only allowed access to the information on suspect number 1. I therefore created the variable indicating the number of suspects and a variable indicating the gender(s) of the suspect(s) reported in the narratives. The "Suspect genders" variable was coded 1= all suspects in the incident are male, 2= suspects in the incident are a combination of male and female, and 3=all suspects in the incident are female.

Trend Analysis

For the calculation of rates, I created an eight-year data file using annual NVDRS data from 2005 to 2012 for children in three age groups (less than 1 year, 1-4, and 5-14) and inter-census bridged race category population data that is used by the National Center for Health Statistics (NCHS) in creating rates for published NCHS reports (CDC WONDER 2015). Only child homicide cases for resident children of the 16 NVDRS states that collected data from 2005-2012 were used in the trend analysis. Figures 1-3 present data from the trend analysis.

Results

For this brief oral presentation, I present the findings from the descriptive statistics (frequencies and cross tabulation/contingency tables) of the variables described previously. The analysis is discussed by four developmental age groups when possible.

Child Homicide Trends. Figures 1-3 show that the risk of homicide for children varies with developmental age group. Risk of homicide decreased over time for all age groups from 2005 to 2012, 24% for infants, 11% for 1-4 year olds, 26% for 5-9 year olds, and 16 percent for 10-14 year olds. Children in their first year of life are at greatest risk of death, with the mean rate of death for victims less than one year old 3.64 times the mean rate of death for 1-4 year olds (the next highest risk group). Boys are at slightly higher risk of victimization across all age groups, 1.2 times higher among infants, 1.2 times higher for 1-4 year olds, and 1.3 times higher among 5-14 year olds. Because of the small number of incidents in any given year, I was not able to create age-sex-and race-disaggregated rates.

Child Homicide Victim Characteristics. Tables 1 and 2 show the demographic characteristics of the 2232 young child victims. With regard to sex, males are a greater percentage of victims for all age groups. However, this relationship is not significant. Minorities are at greater risk of homicide victimization. Non-whites are significantly more likely to be victims than whites are (Chi square $p<.000$; Gamma -.08, $p<.015$). Hispanic ethnicity is not significantly different among victim age groups.

Suspect Characteristics. Table 3 presents demographic data on suspect #1 and on the number and gender of suspect(s) in the homicide incident. Males are significantly more likely to be suspects as victim age increases (Chi square $p<.000$; Gamma -.268, $p<.000$). The age of

suspects differs significantly with the developmental age group of children. Of known suspects, the highest percentage of suspects who kill infants are 20-24 years old. Interestingly, older suspects kill primary school age children. Primary school age children (5-9 year olds) are killed most often by suspects in their 30s or 40s. Among 10-14 year olds, suspects are predominantly age 19 or under. Incidents involving two or more suspects occur more frequently among the youngest and oldest victims.

The victim-suspect relationship also varies significantly by developmental age group. Children aged 9 and younger are most likely to be killed by a parent or the boy or girlfriend of a parent. Babysitters kill approximately 6 percent of children aged 4 and younger.

Among a variety of suspect related circumstance variables, the most significant relationship is among suspects who attempt suicide. An astounding 26.4% of children aged 5-9 were killed in an event where the suspect attempted or completed suicide (Chi Square p<.000; Gamma .498, p<.000). Similarly, suspects where the attack is the direct result of mental illness was indicated in 5.5% of deaths involving primary school age children, but only one to two percent for children in the other 3 developmental age groups. Among children under the age of four, approximately 20% of incidents involved a suspect who had a previous history of abusing the child. This circumstance drops off precipitously for the two older age groups, occurring in only three to seven percent of child homicide incidents.

Incident Characteristics. Table 4 presents frequency distributions for a variety of circumstances of young child homicide. Children in the two youngest age groups, as expected, are significantly more likely to be killed by abuse or neglect, with over 60 percent of children aged 4 and under being killed in abusive or neglectful situations (Chi square p<.000; Gamma -.635, p<000). It is not surprising that 80 percent of infants are killed by a caretaker. The risk of being killed by a step, foster or parent's boy/girlfriend is greatest for children aged 1-4 (28.4%). Weapon type also varies widely among children of different developmental age groups. Firearms killed 72% of all 10-14 year olds, but only 3% of infants. Personal weapons such as hands, fists, feet, and shaken baby are the most common personal weapons used if a child is killed with a personal weapon. Suffocation/strangulation is the most common personal weapon used to kill 5-9 and 10-14 year olds if a personal weapon is used.

Many of the cases of homicide-suicides were familicide incidents related to current or on-going domestic violence within the family. 16.8% of 5-9 year olds who were killed were killed in incidents related to domestic violence. Event circumstances involving other crimes or intimate partner violence account for a higher percent of primary school age child homicides. It is not until children reach middle school age that their risk of dying in a homicide incident outside their home is greater than their risk of dying at home.

Discussion. The findings of this study are consistent with earlier research that find that disaggregating victims by developmental age groups can identify unique constellations of risk factors for child homicide (Bennett, Hall, Frazier et al. 2006, Eber, Annest, Mercy et al. 2004, Sturup and Granath 2014, Vogt and Block 2005). The findings in this analysis like previous research identify potential opportunities for intervention and prevention. Child abuse homicide

risk prevention and intervention is paramount in reducing child deaths (Ornstein, Bowes, and Shouldice et al. 2013). Aggressive educational programs regarding risks of shaken baby deaths and other risky parenting behaviors are needed (Debowska, Boduszek, and Dhingra 2015, Welch and Bonner 2013; Pecora et al. 2012). Homicide-suicide is a serious risk for primary school age children (Mailloux 2014). While familicide events are rare and difficult to predict, when possible, intervention in domestic violence situations and treatment of individuals struggling with mental health issues should address the risks of familicide.

Data Concerns. The NVDRS dataset will become more useful for homicide researchers as the number of participating states grows. In 2014, an additional 14 states started data collection for a total of 32 participating states. As data become available, researchers will be able to address some of the current shortcomings of the NVDRS. Hopefully, the lack of data for homicide incidents in states that do not include additional data collection (child fatality review, domestic violence fatality review, etc.) will decrease. In addition, although there is very little data collected on suspects two through seven, making this data available to researchers will help us gain a better understanding of multiple offender homicide events. As the dataset grows, questions about differences in risk of victimization for children disaggregated by age group, gender, and race can be examined.

Conclusion

The National Violent Death Reporting System is a unique source of homicide data that is particularly useful for examining child homicide. Presenting preliminary analysis at the Homicide Research Working Group annual meeting and garnering feedback from fellow homicide researchers is helpful in the further development of this research project.

Figure 1. Child Homicide Victims by Age Group 2005-2012
16 NVDRS States, Resident Victims Only (N=2069)

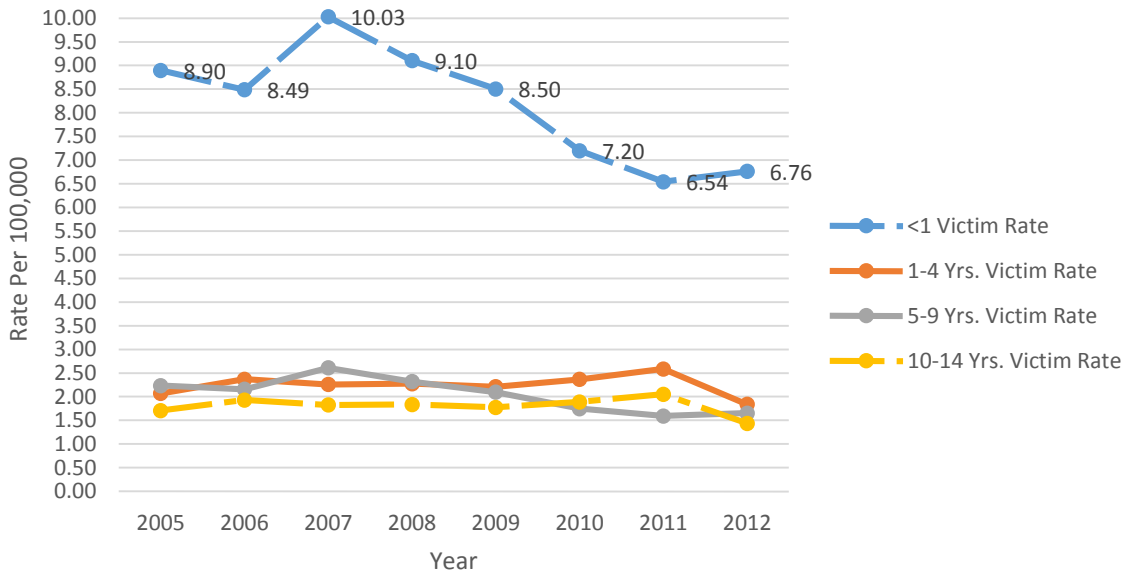

Figure 2. Child Homicide Victims 1-14 years 2005-2012
16 NVDRS States, Resident Victims Only (N=1366)
(Excluding <1 year olds)

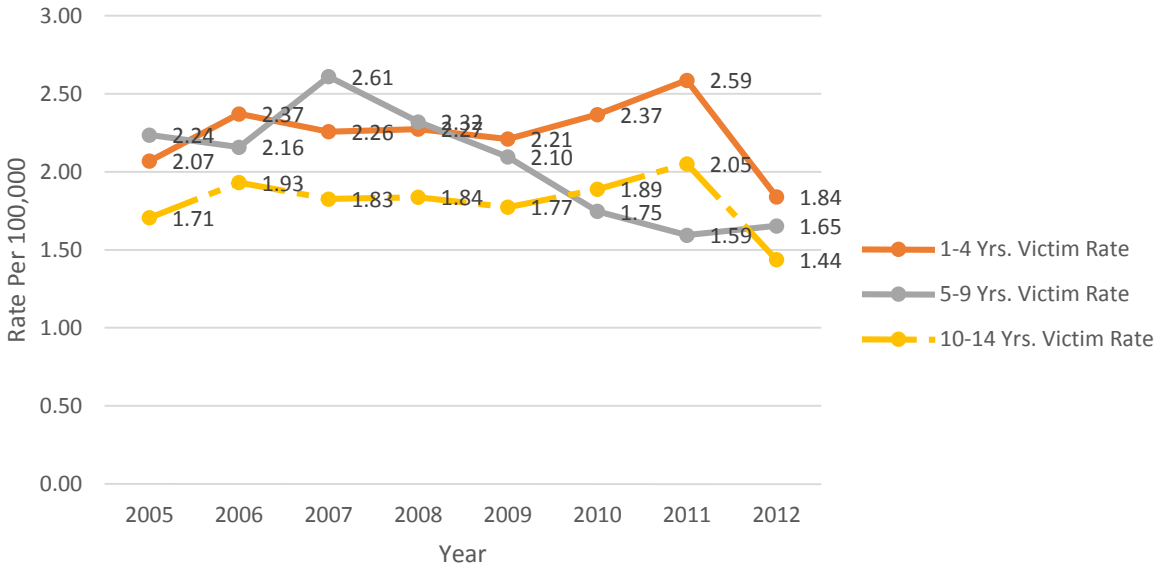

Figure 3. Child Homicide Victims 2005-2012 by Gender and Age Group
16 NVDRS States, Resident Victims Only (N=2069)

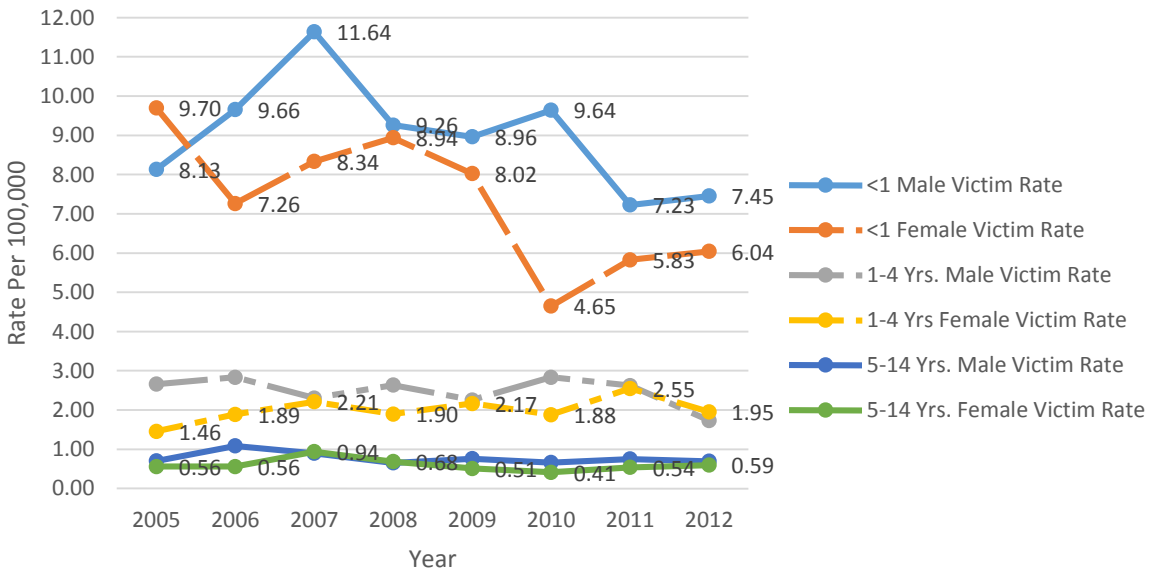

Table 1. Young Child Homicide Victim's Age by Gender and Race, 17 NVDRS States 2005-2012.

Age in Years	Non-White Male	Non-White Female	White Male	White Female	Total
0	202	138	221	188	746
1	88	78	85	61	312
2	94	56	62	48	260
3	38	38	35	33	144
4	38	22	40	22	122
5	16	14	16	20	66
6	13	12	19	20	64
7	11	15	20	10	56
8	15	6	8	13	42
9 & 10	19	12	23	24	78
11	14	11	15	10	50
12	19	11	9	9	48
13	34	16	17	15	82
14	58	22	32	22	134
Missing					15
Total	659	451	602	505	2232

Note: Frequencies for ages 9 and 10 are combined to protect anonymity in small cells.

Table 2. Frequencies for Victim Variables by Child Homicide Victim's Developmental Age Group, NVDRS 2005-2012

	Victim's Age			
Variable	Less than 1 year old	1-4 years old	5-9 years old	10-14 years old
Victim's Sex (N=2232)				
Male	56.5%	57.2%	50.9%	61.5%
Female	43.5%	42.8%	49.1%	38.5%
Victim's Race (N=2217)				
Non-White or two or more races	45.4%	53.9%	44.5%	55.0%
White	54.6%	46.1%	55.5%	45.0%
Victim's Ethnicity (N=2177)				
Not Hispanic	83.3%	84.4%	86.7%	88.3%
Hispanic	16.7%	15.6%	13.3%	11.7%

Table 3. Frequencies for Suspect Variables by Child Homicide Victim's Developmental Age Group, NVDRS 2005-2012

Variable	Victim's Age: Less than 1 year old	1-4 years old	5-9 years old	10-14 years old
Gender of All Suspects (N=1872)				
All Suspects Male	58.2%	63.4%	75.0%	83.1%
Suspects both Male and Female	11.0%	14.0%	5.4%	3.5%
All suspects Female	30.9%	22.6%	19.6%	13.4%
Number of Suspects (N=1871)				
One suspect	89.2%	83.5%	91.4%	82.6%
Two or more suspects	10.8%	16.5%	8.6%	17.4%
Suspect #1's Age (N=1517)				
19 and younger	16.2%	9.3%	11.1%	34.9%
20-24	39.3%	30.6%	13.7%	12.3%
25-29	21.0%	27.7%	12.2%	6.7%
30-34	12.6%	15.5%	11.2%	9.9%
35-39	5.7%	8.1%	16.8%	11.9%
40-44	1.3%	4.6%	17.3%	10.7%
45-49	1.7%	2.4%	10.7%	6.0%
50 and older	2.3%	1.9%	7.1%	7.5%
Sex of Suspect #1 (N=1889)				
Female	34.7%	28.7%	22.4%	13.9%
Male	65.3%	71.3%	77.6%	86.1%
Suspect #1's Race (N=1571)				
Non-White or two or more races	44.8%	53.0%	38.5%	51.0%
White	55.2%	47.0%	61.5%	49.0%
Ethnicity of Suspect #1 (N=1222)				
Not Hispanic	82.8%	86.2%	82.4%	85.1%
Hispanic	17.2%	13.8%	17.6%	14.9%

Table 3 Continued

Variable	Victim's Age: Less than 1 year old	1-4 years old	5-9 years old	10-14 years old
Victim to Suspect #1 Relationship (N=1858)				
Child/Step/Foster/Grandchild or BF/GF's Child	87.1%	79.6%	69.6%	39.1%
Sibling or other family member (e.g., uncle, cousin)	2.1%	5.4%	13.8%	13.4%
Babysitter (victim killed by babysitter)	6.3%	6.1%	0.0%	0.0%
Friend/Acquaintance/BF/GF/roommate/other known person	3.5%	6.7%	9.6%	30.3%
Strangers & rival gang members	1.0%	2.2%	7.1%	17.2%
Does Suspect #1 Have A History of Abusing the Victim? (N=2232)				
No abuse history, unknown, missing	80.7%	78.7%	92.3%	96.6%
Yes, history of abuse by suspect	19.3%	21.3%	7.7%	3.4%
Was Suspect #1 Mentally Ill? (N=2232)				
No, unknown, missing	98.4%	97.9%	94.5%	97.5%
Yes, attack is direct result of mental illness	1.6%	2.1%	5.5%	2.5%
Did Suspect #1 Attempt Suicide? (N=2232)				
No, unknown, missing	98.1%	91.8%	73.6%	88.8%
Yes, suspect attempted suicide	1.9%	8.2%	26.4%	11.2%

Table 4. Frequencies for Circumstance Variables by Child Homicide Victim's Developmental Age Group, NVDRS 2005-2012*

	Victim's Age			
Variable	Less than 1 year old	1-4 years old	5-9 years old	10-14 years old
Was the Death Caused by Abuse (Physical or Neglect)? (N=2223)				
No	33.2%	37.5%	85.3%	94.4%
Yes	66.8%	62.5%	14.7%	5.6%
Was Any Suspect a Caretaker? (N=2232)				
No, Not Collected, Not Available, Unknown	20.1%	22.0%	42.1%	74.6%
Yes, natural parent of child under 15	62.3%	38.1%	47.6%	17.9%
Yes, step, foster or parent's boy/girlfriend	8.1%	28.4%	5.9%	5.6%
Yes, other person taking care of child under 15 (babysitter, sibling, other relative, all others)	9.5%	11.5%	4.4%	2.0%
Was the Incident a Neonaticide? (N=2232)				
No	92.2%	100.0%	100.0%	100.0%
Yes	7.8%	0.0%	0.0%	0.0%
Weapon Type (N=2035)				
Firearm	3.0%	11.6%	40.1%	72.2%
Sharp Instrument	1.0%	4.3%	13.2%	9.4%
Blunt Instrument	22.7%	25.9%	9.7%	4.4%
Fire or burns	.7%	2.9%	5.4%	2.9%
Other weapon	7.3%	6.6%	7.8%	2.9%
Personal Weapons (hands, fists, feet, shaking, suffocation, drowning, neglect, etc.)	65.2%	48.6%	23.7%	8.2%
Type of Personal Weapon Used (N=898)				
Hanging, strangulation, suffocation	16.7%	15.3%	54.1%	67.9%
Personal weapons and fall/push	34.2%	58.2%	21.3%	3.6%
Drowning	6.0%	5.1%	11.5%	7.1%
Shaking, e.g., shaken baby syndrome	36.7%	16.1%	4.9%	7.1%
Intentional neglect, e.g., starving a baby	6.4%	5.4%	8.2%	14.3%
Did the Injury Occur at the Victim's Home? (N=2063)				
No	22.3%	24.6%	25.2%	55.4%
Yes	77.7%	75.4%	74.8%	44.6%

- Continues onto the next page.

Table 4 Continued

Variable	Less than 1 year old	1-4 years old	5-9 years old	10-14 years old
Circumstance: Drug Involvement (N=2232)				
No	98.4%	97.9%	97.1%	96.4%
Yes	1.6%	2.1%	2.9%	3.6%
Circumstance: Other Crime in Progress (N=2232)				
No	95.9%	91.6%	84.6%	86.9%
Yes	4.1%	8.4%	15.4%	13.1%
Circumstance: Intimate Partner Violence (N-2232)				
No	96.8%	93.3%	83.2%	89.9%
Yes	3.2%	6.7%	16.8%	10.1%

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Vehicular Homicide in the United States

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Abstract

Vehicular homicide is a crime of causing the death of another person through operating a motor vehicle in an illegal manner such as gross negligence, driving while under the influence of alcohol or a controlled substance, reckless driving, or the use of a vehicle as a deadly weapon. Data about vehicular homicide are sparse. Neither the FBI national data systems (SHR or NIBRS) nor the National Highway Traffic Safety Administration (NHTSA) Fatality Analysis Reporting System (FARS) have comprehensive vehicular homicide data. I have begun a project to locate information about vehicular homicide using an innovative methodology developed by one of my colleagues at BGSU to study crime by police. The methodology involves systematic, content-specific computer searches of published news articles about vehicular homicide. I am locating news articles about vehicular homicide, downloading them, and archiving them in a digital imaging document database (OnBase). All documents are stored with descriptions of their important attributes and contents, so they can be instantly retrieved using OnBase's powerful search feature." I have verified that simple Internet searches easily identify case-specific descriptions of vehicular homicide events and dispositions. In one example, I was able to extract information about 31 variables that can be coded into a database and analyzed using content analysis and statistical analysis methods. Given the defendant name and court location, case specific information from court case transcripts can provide additional information about the case. My presentation will focus on progress made in the research as of the time of the HRWG meeting.

Vehicular Homicide Information

Vehicular homicide is a crime of causing the death of another person through operating a motor vehicle in an illegal manner such as gross negligence, driving while under the influence of alcohol or a controlled substance, reckless driving, or the use of a vehicle as a deadly weapon. Vehicular homicide can vary in seriousness, as represented by variations in actual offense charged, from aggravated vehicular homicide, vehicular homicide, or vehicular manslaughter.

Data about vehicular homicide are collected by the National Highway Traffic Safety Administration (NHSTA) Fatality Analysis Reporting System (FARS) that includes traffic fatalities resulting from vehicle crashes in which the driver was charged by law enforcement officials with vehicular homicide or manslaughter (NHTSA, 2014). Analyses of the FARS data requested by this author showed that there were 1,256 reported vehicular homicides or manslaughters in the United States in 2012, about 4.1 percent of all traffic crash violations

charged). In 2013, there were 1,175 reported vehicular homicides or manslaughters, about 3.9 percent of all fatal traffic crash violations charged (Cianflocco 2015). A former colleague at the National Archive of Criminal Justice Data did some quick analysis of 2012 NIBRS data (the most recent data currently available) that showed that there were 43 instances of murder/non-negligent manslaughter and 92 instances of negligent manslaughter in which a motor vehicle was used as a weapon, for a total of 135 vehicular homicides in NIBRS reporting jurisdictions. (Zelenock, 2015). This is only about 11 percent of the 1,256 vehicular homicides with charges of vehicular homicide or manslaughter reported in the 2012 FARS data (Cianflocco 2015).

Although some systematic data is collected about vehicular homicide events in NHTSA through the FARS program, there are no data beyond the event characteristics and only a few variables about the driver/person charged. The FARS data do not capture the contextual circumstances leading up to the fatal crashes and the prior history and contributing problems of the driver. Furthermore, there is no systematic data collected about the post-crash adjudicatory processes, outcomes, and punishments levied, or about the victim's family and their reactions.

Data Collection

In view of the absence of systematic data about a number of aspects of vehicular homicide, I have begun a project to locate information about vehicular homicide using an innovative methodology developed by one of my colleagues at BGSU who studies crime by police. The methodology involves systematic, content-specific computer searches of published news articles about vehicular homicide. In his research about crime by police, Dr. Philip M. Stinson developed the technique described below.

> Data were derived from published news articles using the Google News search engine and its Google Alerts e-mail update service. Google Alerts were conducted using 48 search terms developed by Stinson. The Google Alerts e-mail update service sent a message each time one of the automated daily searches identified news articles in the Google News search engine that matched any of the search terms. The automated alert notices contained a link to the URL for the news article. Articles were located, examined for relevancy, printed, and archived in a digital imaging database for subsequent coding and content analyses. (Stinson, 2009:6-7)

Using Stinson's techniques, I am locating news articles about vehicular homicide, downloading them, and archiving them in a digital imaging document database using OnBase, a "content management program that enables scanning, printing, e-mailing, and organizing. All documents are stored with descriptions of their important attributes and contents, so they can be instantly retrieved using OnBase's powerful search feature." (BGSU Information Technology Services, 2015).

I have verified that simple Internet searches easily identify case-specific descriptions of vehicular homicide events and dispositions. See, for example, the news article reproduced below.

YOUNGSTOWN, OH
A woman who was sentenced to five years in prison for killing a motorcyclist in a 2012 drunken-driving crash told Judge James C. Evans that her own mother was killed by a drunken driver when she was 6. Jill Bissett, 49, of Struthers, also said Thursday in Mahoning County Common Pleas Court that she is truly sorry for the accident that killed 20-year-old Tammy Miller and wanted to take responsibility for her actions. Bissett pleaded guilty May 19 to counts of aggravated vehicular homicide, a second-degree felony, and driving under the influence of alcohol, a first-degree misdemeanor. She admitted driving drunk during a May 4, 2012, accident in which Miller was killed. As part of the plea agreement, county prosecutors agreed to stand silent when Bissett was sentenced.

The accident occurred on state Route 289 just east of Sixth Street in Poland Township. Troopers with the Ohio State Highway Patrol said Bissett was westbound on Route 289 in a 2002 Ford Taurus when she traveled left of center and struck Miller's motorcycle, which was eastbound.

Miller died later at St. Elizabeth Health Center, and Bissett was treated there for minor injuries. Miller's parents, Arthur and Mary Miller, were on hand along with several family members. Bissett also had several family members on hand for support.

Arthur Miller said he was satisfied with the sentence. The Millers said their daughter loved animals and motorcycles and was very kind. "If she only had $10 to her name she would make sure she brought Christmas presents for everyone," Mary Miller said of her daughter, who was one of nine siblings.

Judge Evans said a pre-sentence investigation showed that Bissett also had Xanax, a sedative, in her system with alcohol when she hit Miller. Her blood-alcohol content was .216 when a blood sample was taken after the crash. The legal limit for drunken driving in Ohio is .08. Bissett's attorney, James Lanzo, said his client is an alcoholic who was placed in a psychiatric ward after the accident because of her grief.

Judge Evans said it is up to Bissett to stay sober. Bissett said she has been sober since the accident. "There's no punishment that can cure you other than yourself," Judge Evans said. "I'm sure, as a human being, you knew you shouldn't have got behind the wheel of that car."

Bissett could have received up to eight years in prison. The six-month maximum sentence for DUI will run concurrently with her felony conviction. Court records show only a seat-belt violation in Mahoning County Area Court

in Canfield in 2003 on Bissett's record, and a failure-to-control violation in 2011 from Struthers Municipal Court, which was pleaded down from a DUI. (Gorman, 2014)

Data Coding

From a reading of the news article above, one can observe that a number of characteristics about the case can be identified (as highlighted above), to be developed into keyword terms that will be used to locate news items via Google News search engine and subsequently used to conduct content analyses of the new vehicular homicide item database. Based on the content of this single article, the following search terms and variables can be identified.

1. Offender gender
2. Sentence type and length
3. Offense event
4. Event date
5. Prior life events
6. Offender age
7. Court of jurisdiction
8. Remorse about event
9. Victim gender
10. Victim age
11. Offender accepts responsibility
12. Plea
13. Charges filed
14. Admission to charge
15. Prosecutor action at sentencing
16. Event location
17. Event process description
18. Victim support at court
19. Offender support at court
20. Victim family satisfaction with sentence
21. Victim family characterization of victim
22. Pre-sentence investigation findings
23. Alcohol involved
24. Blood alcohol content level
25. Drugs involved
26. Type of drug
27. Offender mental health issues
28. Judge order to offender
29. Judge advice to offender
30. Maximum possible sentence
31. Offender prior criminal history

This research is just beginning. By the time of the HRWG meeting in June, my plan is to have developed the Google News search terms, identified news reports, created a database to store the news reports, and conduct some preliminary content and statistical analysis.
The outline of my presentation (at this time) is shown below

A. What is vehicular homicide and how does it differ from other homicide?

B. The lack of detailed data about vehicular homicide at the national level.

C. Demonstrating an alternative research method to traditional event counting and analysis using national data systems.

D. Example findings from preliminary analysis.

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Occupational Risk of Homicide or Suicide for Farmers and Agricultural Workers

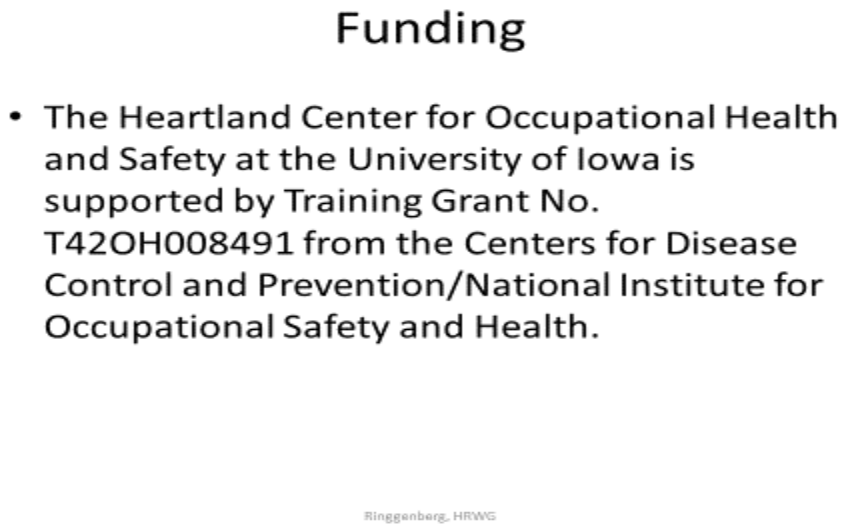
Wendy Ringgenberg, PhD, MPH

Master's Thesis

University of Iowa Occupational and Environmental Health

Abstract

This study looked at 19 years of Bureau of Labor Statistics Census of Fatal Occupational Injuries data for the purpose of describing occupational homicide and suicide for farmers and agriculture workers. The study found homicide rates for farmers and agriculture workers were lower than rates for total occupations for 14 years, while suicide rates for farmers and agriculture workers were consistently higher than total occupations. Significant regional variations in homicide and suicide patterns were identified. Finally, this study confirmed prior research that males were most commonly victims of both occupational homicide and suicide when compared to females, while both male and female farmers and agriculture workers were most likely victims of homicide by firearms. Also presented will be the author's experience in locating homicide, suicide, and occupation data for analysis.



The idealized version has inherent risk

- "Agriculture is one of the nation's most dangerous industries," ranging 22.3 to28.6 deaths per 100,000 adult workers, with an annual average of 806 deaths (1992-2002) with 85% of those deaths in production agriculture.
- Leading cause of fatalities is tractor roll-over.
- *(Donham & Thelin, BLS & National Safety Council summary; NIOSH)*

Ringgenberg, HRWG 3

But what about homicide & suicide?

- Iowa farmer, Tom Lyon, killed by Iowa farmer in 2003, Rodney Heemstra over land use.
- In 1985, Dale Burr shot his wife, a neighbor, local bank president, and himself related to economic stress.
- Iowa farm family, The Mark Family, shot to death in own home in 1975 by his brother over inheritence.
- In 2011, Craigslist homicides for 3 farmhands and one attempted homicide for financial gain.

Ringgenberg, HRWG 4

What is the occupational risk of homicide or suicide for farmers?

- What role does occupation play in homicide or suicide for farmers or farm workers?
- If better understood, protective strategies can be developed…….right?

- Taboo to ask.
- *Is your recommendation going to be, "Be wary of your son or neighbor?"*

Ringgenberg, HRWG 5

Existing gaps in farmer and agricultural worker occupational hazards

- Investigate occupational risk factors for farmers to homicide.
- Little comparison between farmer homicide and farmer suicide.
- Regional variations in farmer or agricultural worker occupational homicide and suicide.
- Comparison of farmers, a manager position, and agricultural workers, a laborer position, and other occupations.
- Farmers have access to guns, the most prominent means for both homicide and suicide.

Ringgenberg, HRWG 6

Suicide in farmers

- Browning, et al. (2008) found that suicide rates of southern U.S. farmers aged 25-34 years, and over 75 years of age were significantly higher than the total white male population in the states studied, and a firearm was used 86% of the time.
- Skegg, Firth et al (2010) examined occupational suicides between 1973 and 2004 in New Zealand and found that farmers, hunters, and cullers were more than twice as likely as all other occupations to use firearms.
- Kposowa (1999) 1979-1989 data, found that only (non-agricultural) laborers and the unemployed had higher risks of suicide than farmers or farm managers using 1979-1989 data.
- Stallones (1990) found the highest suicide rates among Kentucky farmers.
- Firearms were the most frequently used means for suicides *(Stallones, 1990, Booth et al., 2000)*

Ringgenberg, HRWG 7

Farms, farmers, and agricultural workers in the United States

- 2.2 million farms on 917 acres of land for an average of 418 acres per farm *(NASS, 2010).*
- Small farms (those with annual incomes less than $250,000) comprised 91% of all farms *(Hoppe, MacDonald, and Korb, 2010).*
- The family farm accounts for 95% of the agricultural work culture in developed countries *(Donham and Thelin, 2006).*
- 45% of farmers claimed farming as their principle occupation *(EPA, 2013).*
- Family farmers enjoy being their own boss…advantages are also potential stressors, including personal responsibility for the financial success or failure of the family business.

Ringgenberg, HRWG 8

Homicide in agricultural populations

- United Farm Workers of America found that homicide rates between 1973-2000 was higher for farm workers in comparison to the general California population *(Mills et al, 2006).*
- A study of farm fatalities in youth populations identified that suicide accounted for 8% of deaths and homicide accounted for 6% *(Goldcamp, Hendricks, & Myers, 2004).*

Ringgenberg, HRWG 9

CFOI Data (BLS)

- All groups of employees including private sector workers, government workers, self-employed, and family businesses.
- Data from all 50 states plus the District of Columbia are provided through state and federal agencies that collect, code, and verify fatality data from workers' compensation reports, death certificates, accident reports, and media.
- CFOI includes all fatal work injuries in its annual total, including fatal injuries that occur at small businesses or on family farms. Final decisions about whether a case is in scope for CFOI are made by BLS.

Ringgenberg, HRWG 12

Methods

- Denominator values for total population were taken from the historical data from the Current Population Survey (BLS).
- Denominator for the farmers and agricultural workers was taken from the historical data on Current Population Survey from 2003 through 2010.
- Denominator data for farmers and agricultural workers for 1992 to 2002 was estimated by averaging the first five years of data (2003-2008) in the CPS.

Ringgenberg, HRWG 13

1992-2002; 2003-2010

- 1992 to 2002, CFOI used the U.S. Census Bureau Occupation Classification System to classify occupation.
- 2003 to 2010, CFOI used the 2000 Standard Occupation Classification (SOC) system to classify occupation *(BLS, 2012).*
- "The substantial differences between the two occupation classification schemes constitute a break in series, and users are advised against making comparisons between them" *(BLS, 2012).*

Ringgenberg, HRWG 14

Variables

- Year of death
- Age Category
- Race or ethnic origin
- Occupation
- Employee status
- Worker activity at time of incident.
- Worker location.
- Geographic location based on the state and the Bureau of the Census regions
- Employer establishment size
- Event or Exposure: the manner in which the injury or illness was produced or inflicted by the source

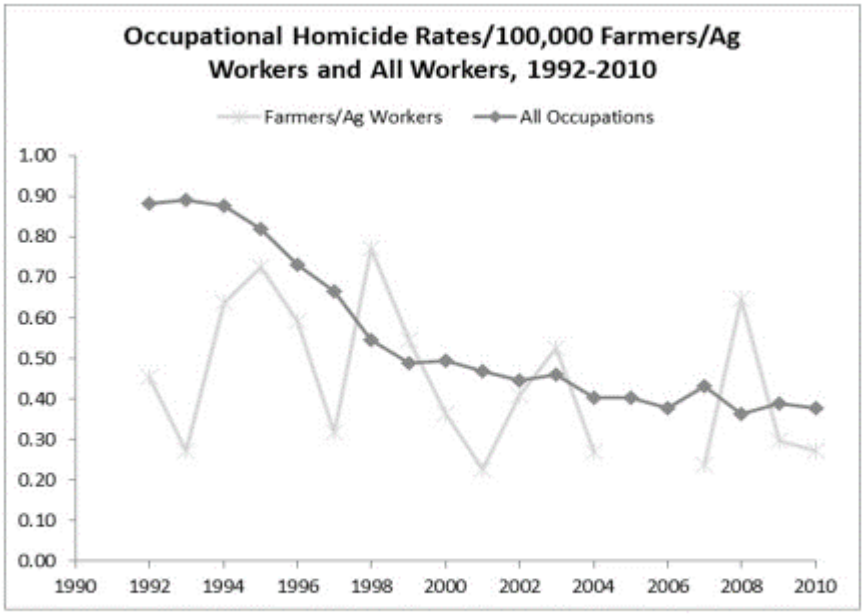
Ringgenberg, HRWG 15

Results

	Fatalities	Homicides	Suicides	
Farmers	6664 (6%)	75 (0.5%)	160 (3.8%)	235
Farm Workers	3372 (3%)	96 (0.7%)	70 (1.7%)	166
Total Workers	110,220 (100%)	13,849 (100%)	4175 (100%)	

Fatal injury data and rates were generated/calculated by the author with restricted access to BLS CFOI microdata.

Ringgenberg, HRWG 16



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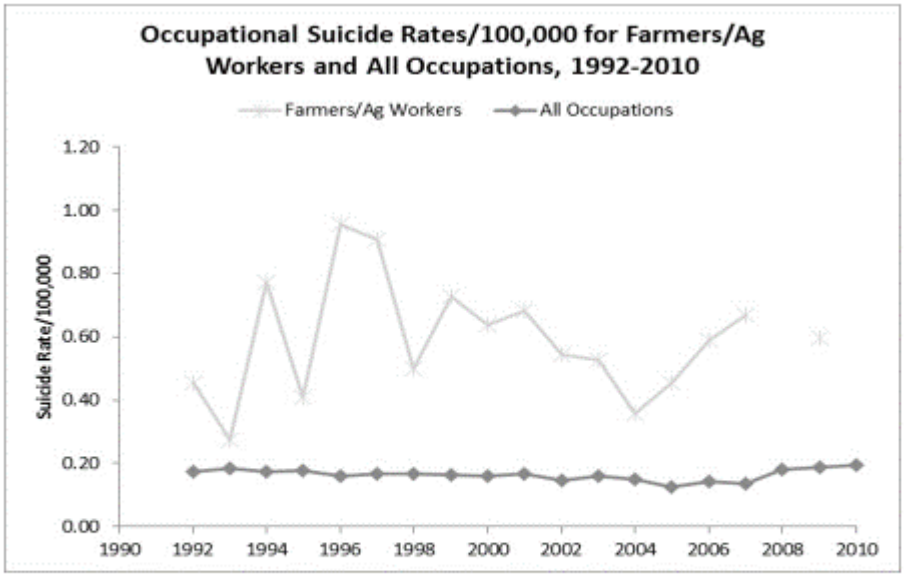
Ringgenberg, HRWG 17



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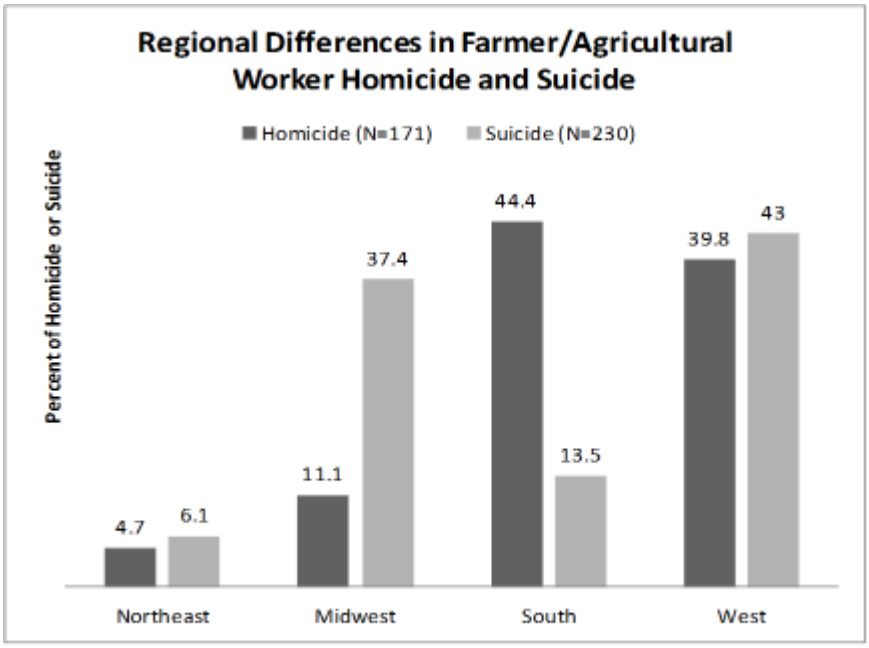
Ringgenberg, HRWG 18



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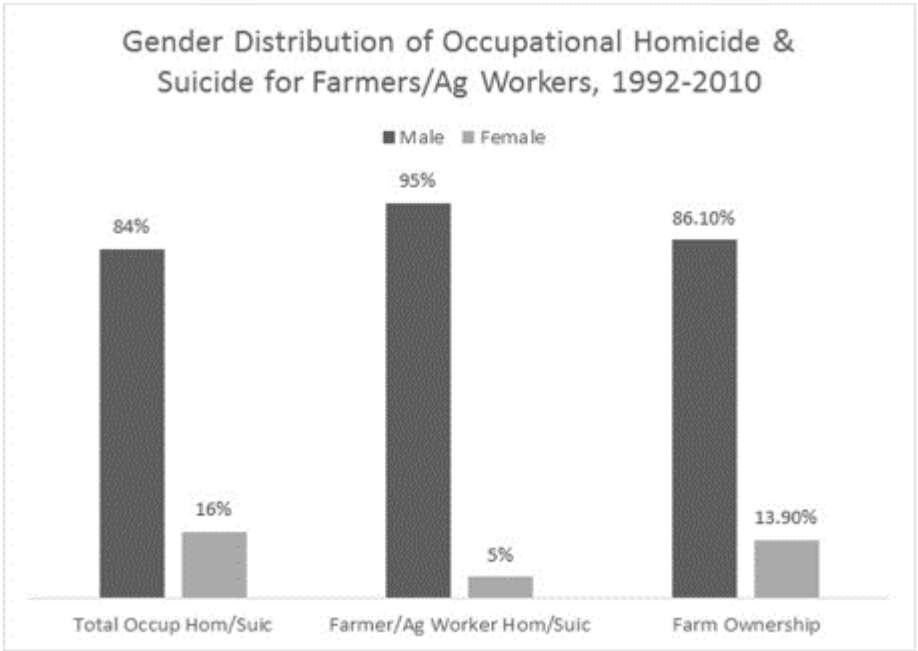
Ringgenberg, HRWG 19



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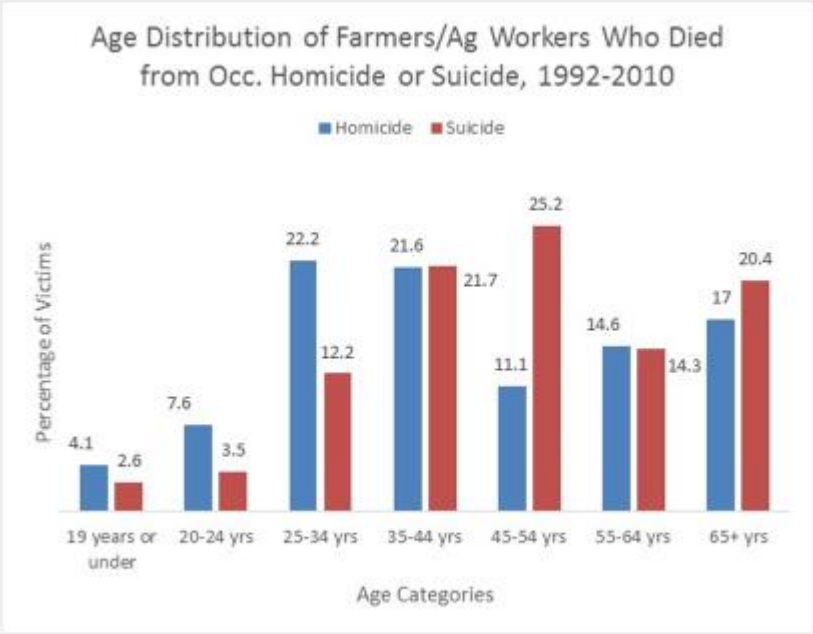
Ringgenberg, HRWG 20



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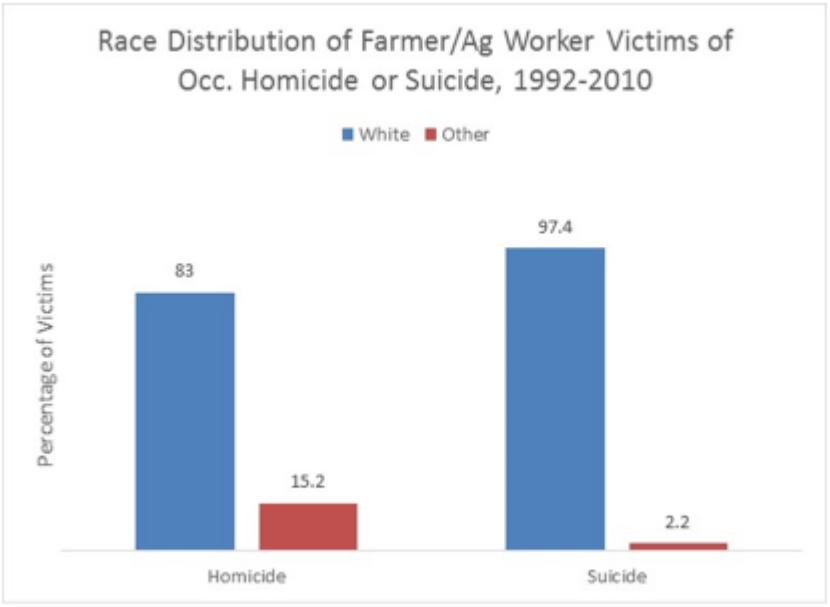
Ringgenberg, HRWG 21



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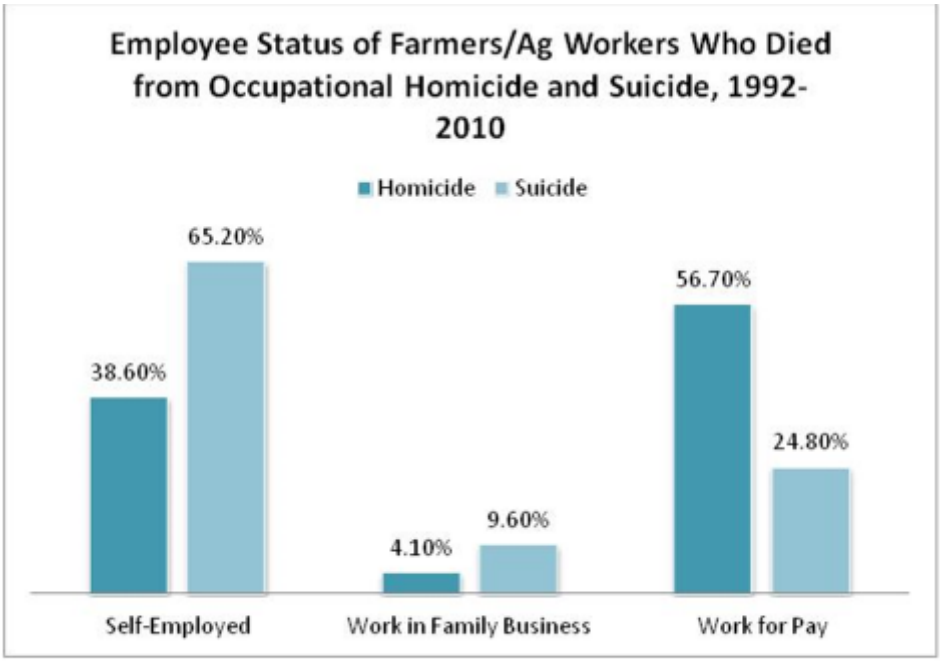
Ringgenberg, HRWG 22



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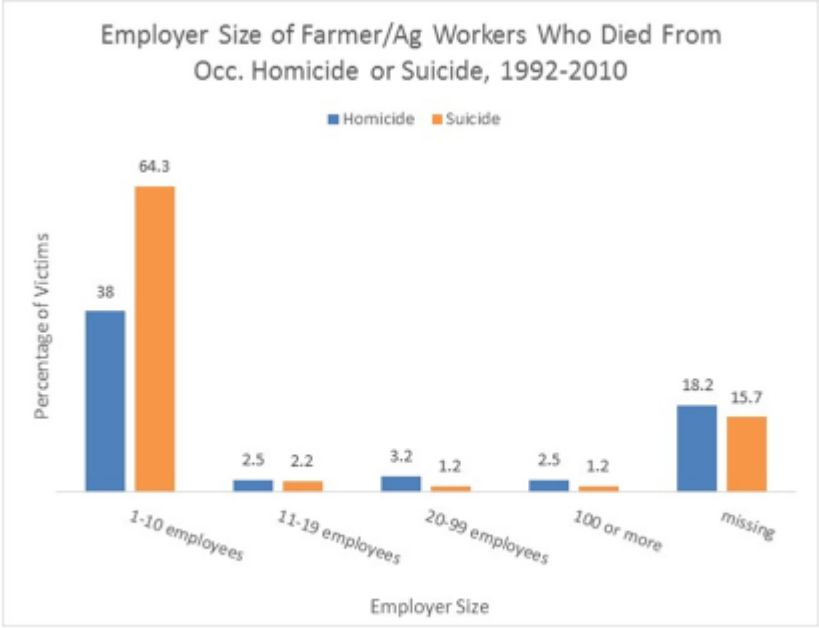
Ringgenberg, HRWG 23



Fatal injury data and rates were generated/calculated by the author with restricted access to BLS CFOI microdata.

Ringgenberg, HRWG 24

Predictors for Homicide or Suicide for Farmers and Farm Workers

- Males have 6x higher odds for suicide over homicide (vs. females).
- Whites have 4.7x higher odds for suicide over homicide (vs. non-Whites).
- Self-employed have 2.3x odds for suicide over homicide (vs. those working for pay).
- Smaller size (1-10) establishments have 1.9x odds for suicide over homicide (vs. >11 employees).
- 35-54 yo have 1.7x odds of suicide over homicide (vs. <35 yo).

Ringgenberg, HRWG 25

Fatal injury data and rates were generated/calculated by the author with restricted access to BLS CFOI microdata.

Ringgenberg, HRWG 26

Limitations

- Estimated denominator numbers means risk calculations are also estimates.
- CFOI data was not compared to non-fatal injuries and therefore lacks any insight into attempted homicides or attempted suicides.
- Farmers and agricultural workers are taken from two different occupational categories, making comparisons to other occupational types more difficult.
- Prior research has indicated that location of where the incident takes place provides some insight into the event, although CFOI data lacked detailed location information.

Ringgenberg, HRWG 27

Discussion on Limitations

- There is an opportunity for additional data to be collected.
- Occupation is not collected nationally during homicide investigation or made available for research.
- Location is collected regarding rural or not, but not on farm land and whether or not location was occupationally related.
- Occupation is potentially based on reported or primary occupation vs. secondary occupations.
- Homicide and suicide attempts are not connected to occupation in databases available for study.
- Lacking more detail, understanding and prevention is hindered.

Ringgenberg, HRWG 29

Final Thoughts

- Suicide is consistently higher in the farmer and farm worker population.
  - Why? What are the contributing factors?
  - There are public health/community resources and programs for suicide prevention that we need to promote for farmers and farm workers.
- Homicide in farmers and the farm worker population (at least the 45% that report this occupation) is lower.
  - What is the relationship between the victims and perpetrators? What is the motive?
  - The resources are under crime and safety categories. How can we promote cross-discipline discussion and promotion?
- The total population is fairly undefined, so a risk rate is difficult to ascertain.
  - How can we promote more complete data collection, and interest for research.

Ringgenberg, HRWG 31

Not in our community:

An exploratory analysis of intimate partner homicide in rural versus urban communities.

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Introduction

As recent news coverage of players within the National Football League demonstrates, intimate partner abuse (IPA) remains an ongoing problem that crosses all demographic boundaries. Indeed, according to one of the most recent studies on IPA – the National Intimate Partner and Sexual Violence Survey (NISVS) – approximately 33 percent of women have been victimized by an intimate partner in her lifetime (Black, Basile, Breiding, Smith, Walters, Merrick, Chen, et al. 2011). Although research continues to indicate that a majority of IPA victims are female, information also indicates that men are not immune from domestic abuse either (Tjaden & Thoennes, 2000). Unfortunately, these findings are not isolated to the United States as these trends mirror those found internationally (Ely, Dulmus, & Wodarski, 2004; El-Mouelhy, 2004).

Although research on IPA has grown substantially since the 1970s, there are areas of research sorely in need of further investigation. One such research area that suffers from a dearth of information is the investigation of the most extreme form of IPA – intimate partner homicide (IPH) – within urban versus rural communities. As noted by various scholars in the field (e.g., Beyer, Layde, Hamberger, & Laud, 2014; Dudgeon & Evanson, 2014), IPA (overall) within rural communities is largely unexplored to date. Moreover, there is relatively little knowledge on how IPH varies between rural and urban communities. Thus, this study attempts to address that gap in knowledge by analyzing the etiology of IPH in rural and urban communities.

Intimate Partner Abuse in Rural versus Urban Communities

To date, relatively little empirical investigation has focused on analyzing IPH in rural versus urban communities. The aforementioned is surprising given that available research does indicate IPA in rural communities presents survivors with unique barriers to help-seeking activities. First, in contrast to urban communities, rural communities are more isolated (Beyer et al., 2014; Dudgeon & Evanson, 2014). As a result, a perpetrator can assault survivors largely with impunity (Beyer et al., 2014; Dudgeon & Evanson, 2014). Secondly, in contrast to urban communities, residents within rural communities typically adhere to traditional gender roles where men are the "heads of the households" and women are to obey (Beyer et al., 2014; Dudgeon & Evanson, 2014). The distribution of residents across large areas of land also presents unique challenges to survivors of IPA as access to social services is restricted and law enforcement response time is lengthened (Beyer et al., 2014; Dudgeon & Evanson, 2014). Finally, the widespread ownership of firearms within rural communities also affects survivors involved in relationships marked by IPA (Beyer et al., 2014; Dudgeon & Evanson, 2014). In order to further explore the differences in IPA between rural and urban area, this study focused on IPH.

In one of the few studies investigating IPH using spatial analysis techniques, Beyer and colleagues (2014) found IPH varied across race, marital status, county of birth, and neighborhood characteristics. Through their research, Beyer and colleagues (2014) found that the average age of IPH victims was 37 years old, while perpetrators were approximately 40 years old. In terms of race, non-Caucasian women were less likely to be killed by a current/former intimate partner in a rural area; however, more victims lived in urban areas overall (Beyer et al., 2014). IPH victims in rural areas were also typically married (Beyer et al., 2014). Given these findings, the authors note that additional investigation on IPH between rural versus urban communities is necessary.

Data and Methods

In order to explore differences in IPH between rural versus urban areas, we utilized data from the dataset entitled: "Intimate Partner Homicide in California 1987-2000," which was collected from the *National Institute of Justice Data Resources Program*, originally compiled by William Wells and William DeLeon Granados. These data included variables focused on the IPH victims, domestic violence incidents, shelter availability, and the rural/urban nature of counties. The data were aggregated by county for each year in the dataset. Although these data are not as recent as most datasets, the choice to use them was based on the longitudinal aspect of these data and the completeness of the reporting. Other data come from the U.S. Census Bureau and address additional social characteristics.

Measures

Dependent Variable

For this particular project, the variable of interest is the rate of IPH victims, because our intention is to understand the differential nature of IPH in urban and rural areas.

Independent Variables

In order to understand the dynamics of IPH between urban and rural areas several variables were investigated. First, we included a dichotomous variable that delineated urban (1) rural (0) based on the population standards of the U.S. Census Bureau in order to account for geographic location. Additionally, common predictors of IPH were also used: the rate of domestic violence arrests (per 100,000), the rate of incarceration after domestic violence arrest (per 100,000), and rate of federal shelters (per 100,000). To control for social disorganization, generally, and for heterogeneity, specifically, race and ethnicity were measured as the total population of White, Black, Latino, and Other in each county. To account for mobility, the rate of population change was used. Finally, poverty was measured by median county income.

Analysis

To understand the differences in IPH between urban and rural counties in California Regression with OLS estimators was used. Other tests suitable for our dichotomous variable for county are also estimated.

Results

There are several notable results from this study. A positive and significant relationship between total domestic violence arrests and the total IPH victims is evident, $r=.890$, $p< .01$. This indicates that more arrests could lead to more IPHs. Results indicate that law enforcement within rural counties are arresting at a significantly higher rate than law enforcement within urban counties $t=-6.107$ (810), $p< .01$. In other words, if arrests lead to more IPHs – given the perception on the part of the abuser of losing control of the victim - it is likely that rural counties will have more IPHs. While the data highlight that rural counties do, in fact, have a higher rate of IPH victims, this is not statistically significant difference.

Contrary to what would be intuitive based on the literature, rural counties in California have a significantly higher rate of women's shelters per 100,000 females $t=-.994$ (810), $p <.01$. However, results indicate a strong positive and significant relationship exist between the number of shelters and the number of IPH victims, $r=.795$, $p<.01$. In other words, more shelters was correlated with more IPHs. Unsurprisingly, urban counties had a higher IPA conviction and incarceration rate (after IPA arrest), but this failed to reach statistical significance. Finally, conviction rate, incarceration rate, and IPA arrest rate were not significant predictors of IPH even when controlling for county and income.

Concluding Discussion

Although this study was limited to the state of California, many of our results shed light on the differential nature of IPA and IPH based on geographical location. Indeed, our results indicate that rural areas have a higher rate of access to shelters for the population, but actually fewer shelters on the whole. The aforementioned is surprising given available research indicates that survivors in rural communities are more geographically and socially isolated (Beyer et al., 2014) and thus may encounter great difficulty with accessing a shelter. In another

surprise difference, a statistically significant difference was found when investigating conviction and incarceration rates. Interestingly, rural areas were less likely to have an IPA arrest result in a conviction or an incarceration, perhaps due to unique setting. As previously mentioned, survivors in rural communities may not want other residents learning about the violence at home. In contrast, given the closeness of the community, the abuser may be friends with law enforcement and thus the victim may be less likely to pursue charges. Regardless of the reasons, these preliminary results potentially indicate a difference in policing and sentencing perspectives based on geographical location. However, until further analysis can be done, readers should avoid drawing firm conclusions.

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Panel Session 4: ***Subtypes of Homicides***

Chair: Lin Huff-Corzine – Recorder: Mindy Weller

Recorder Notes:

Presentation 1: Correlates of Child Homicide Victimization in Sixteen States Using National Violent Death Reporting System, 2005-2011.
Author & Presenter: Kim Vogt.

Q1.
Adam Pritchard- In terms of the quality of the data, this is maybe a methodological question and maybe able to get another paper out of this, but a lot of your data pools (pooling the unknown with the missing), but one of the things that may be interesting or worthwhile to do is to run the… but to get a sense of within/without the missing… To make your case for why we should have better data collection on those specific variables, if its 75% of the known cases with 25% when you include the unknown then we need to be bettering that…
A1.
Kim Vogt- Yes, and I can run it that way but for some of those, for others they sort of, they collapse some of those. They actually have an indicator there of No most of the time but some of the time they sort of blank because it's No or because of missing and the way that its actually written in the code book it's a little unclear as to which stage were using it and to get to what I think will be better data collection, they go forward, in 2013, they went to a Web based data collection system. So data will come in automatically, so that will be imputed variables that they are actually, the abstractors in the field are actually doing this in the state. They are greying out things you can't do. So they are putting in those protections that I think will help clean up the data as we move forward.

Q2.
Michael Becker- So one more rather specific question, it's on the rival gang members and strangers. It was peculiar that those were clumped together…
A2.
Kim Vogt- And I can tell you why. They are clumped together because the N's were so small that I had to. I am required to not report any cases lower than 5 in a cell. And so,… which is actually surprising because, for example, in the Chicago data set there are so many gangs that it's not a problem at all but I had to do that because of the… particularly for 5-9 years old. That is a problem that should go away with larger N's. Basically I had to collapse two of those.

Q3.
Kathleen Heide- You mentioned several familicides. How did you think… does the data set identifies a familicide or did you determine that?
A3.
Kim Vogt- That's the nice thing about using an incident based data set, is that it is… they are all linked and so you can actually get them by the case number or the incident number,

essentially. One variable is whether or not the suspect attempted or completed suicide. But that would just tell us it was one kid and one adult but they are all linked and you can see them all, so they're all there.

Q4.
Kim Davies- Does drug involvement include alcohol and do you know more about the drug involved crime?
A4.
Kim Vogt- I think not? I would have to look at the codebook and see what the definition is again. But a lot of those variables are very interesting because there is a hierarchy in where they pull that data from. Whether they pull it from the tox report or where they pull it from the coroner/medical examiner's report. The over-riding rule is what the abstractor determines to be the most credible piece of information is. So, that's the majority of the ones that are coming from the toxicology reports, or tox screens, and such. But that variable, I think, is much more tied into what the medical examiner has interpreted.

Q5.
Becky Block- Could you talk a little bit more about… Is caretaker your definition?
A5.
Kim Vogt- That's OUR definition. The one that we created long ago. But it is the one that is often used in the literature. So I went through and hand coded those so that basically any time that the suspect was caring for that child… most of those are pretty clean. They missed a few that I thought were caretaker related but what they were repeated but I think it was hard for them to figure out definitively that there was a caretaker there. There were plenty of them so it wasn't a big issue.

Q6.
Michelle Craske- A quick question about the data source. Do you happen to know if the demographics include or ask about the veteran status of the offender or victim?
A6.
Kim Vogt- Not the suspect, but the victim. So for homicides it's not terribly useful but for suicides and those types of examples, they ask those questions of those folks.

Q7.
Becky Block- You mentioned that this was a great source of information for mental health. Are you interested in looking at mental health? Could you talk about the kinds of things they have and the sources.

A7.
Kim Vogt- I think great as in better than what we can usually get out of a law enforcement report. That's more like what I was thinking there. Basically they have a trigger, there's a circumstance, so if the circumstance is mental health it goes through and it asks is it depression, etc. So you can get down to all that nitty gritty. For the suspects in these cases, for example, I think there's less than there were before. For victims of suicide, they have data for

those folks and the definition is pretty clear about them as to whether they are active or within a time frame, if it occurred recently.

Q8.
Chris Rasche- What is your general feeling about the unique constellations discussed in your conclusions?
A8.
Kim Vogt- For me the unique constellations have to do with the cases that were different than the ones I had been paying attention to before. I know that there are familicides there but I hadn't gone through those line by line, and all of those narratives. The number of those cases, it actually surprised me, the number of females who were familicide offenders in those cases. So, it was surprising and I need to take a deeper look at that over the next couple of weeks. That was very interesting to me. That was not the case, for example, in the Chicago homicide data set and they may have to do with the awareness of what's going on.

Q9.
Clare Alley- Is suicide and health something you'd be interested in exploring or collaborating on? Suicide is really a point of interest for me and I would like to talk to about that.
A9.
Kim Vogt- I'm always willing to talk about this stuff.

Presentation 2: Vehicular Homicide in the United States
Author/Presenter: Christopher Schubert Dunn

Q1. Vance McLaughlin- One thing I found that is difficult is that all of these are difficult is to accept that all of these are accidents. To give you an example, in Buffalo a man and a woman were in a car and they were killed. The question was: Was it an accident? Was it a suicide/homicide? He was the driver, or was it a double suicide… and they wrote it up as an accident, yet the husband was the one being questioned for the second time by the police on murder, 5 o'clock and they died at 4 o'clock. I would have thought it was at least a suicide on his part because I don't know if his wife was a willing partner. So I guess I'm saying that there's a lot more that's going on in some of these accidents than being merely accidents. And think that because of the insurance portion of it. Sort of like the folks who… with alcoholism… that it's a disease… I find out from some of the researchers, they sort of tell me, that they really don't think it's that way but we've got to cover it up with the insurance to get people help with alcohol, if I go that direction on describing it. So, I think the insurance kicking in to with the accidents is difficult. I just want to say that I think it's a really good area to look at.
A1. Christopher Dunn- Thanks Vance. I really appreciate that. I know that Phil Stinsen's research has been very successful using the media abstraction approach and so forth. What I have, or rather, this particular line of research about vehicular homicide is going is that you do get the summary of the official accident report. It's imbedded in the FARS data system, plus the additional information that's collected and published by the reporters. So it would be interesting to talk further about what kinds of keys to look for, because I'm not going to go and code 981 articles for Lexus Nexus and its related articles from the internet. The way you do this is you plug each of these articles into a text searchable database and you create an index of

terms you want to search on and then you let the computer do its work and match those key terms to articles. Then you start putting those into a database and then you can start analyzing them. So it would be interesting to talk about key terms that might hint at some of thise things you're getting at.

Q2. Pawel Waskiewicz- I have a technical question. You're mentioning 36 variables and in the paper there are 31. (Why?)
A2. Christopher Dunn- That's because there were thirty one when I wrote that and then I ended up finding more that I had missed.

Q3. Chris Rasche- Have you noticed any discrepancies in using newspaper articles, discrepancies between the facts that are given by the newspaper articles versus the facts that are reported by law enforcement?
A3. Christopher Dun- That's the whole point of being able to link the two in the way that I suggested. I just figured out how to link the two a week or so ago. So, I haven't had a chance to even look at any of that.
Chris Rasche- I would be really interested in you giving us a follow up next year becuase I work on a domestic violence fatality review team and our team has elected not to include newspaper stories about these cases, such as they appear. For concern that there might be, that the two telling of the newspaper versus law enforcement would be different. Some of them have had experience with that. So, if anybody knows more about that and as you continue to develop this I'd be interested in hearing more about how to reconcile this.
Christopher Dunn- That would be one part of it but there's all of those additional variables that aren't even collected in the official records that are, in a sense, very useful if they turn out to be correct. So that's an issue.

Q4. Michael Becker- As a matter of fact, the premise of my presentation tomorrow is based on a collection of news reports and what we found was that if you pick only one news report you have a pretty strong possibility that it was either intentionally misreported information by the police, to mislead the public make it seem a little bit nicer than it may have actually been, or otherwise. But if you have three discreet news reports and if you have them a little bit further after the incident itself you can have a much clearer picture. It's called triangulating the data points. I would recommend, potentially, keeping it as at least a couple of articles….
A4. Christopher Dunn- That's why I used… You saw the one example I used where there were fifteen articles for that one case. So, that's what I'm hoping I'll find using multiple articles to make those kind of comparisons. Thanks for pointing that out.

Q5. James McCutcheon- Do you know if there's any way to look at any discrepancies between social characteristics, what's reported and what's not?
A5. Christopher Dunn- One of the things that is possible to do, but not without some money and a lot of time, is to go to and retrieve the local court records on those cases that have been filled with vehicular homicide charges. That's not easy to do because many of them are not computerized and you have to pay for Xeroxing and it's going to be on the bottom of the pile for somebody to do that and so it would take an extensive amount of time.
James McCutcheon- Thank you

Christopher Dunn- Yes, but that's where you would it.

Q6. Vance McLaughlin- I was just going to give Chris an example of what you're talking about. Last case that I worked, on two driving. These two girls, one seventeen/one fourteen, stole a car from a group home and they left. All the newspaper reports talked about that they were on a suicide mission. They were on a suicide mission. Well, what happened, the chase was over forty miles from one state to another and they ended up going head on into another car. They were both killed and the passenger, he had to be kept in a coma for ten days just to do the operations on him, he lived. But it's interesting that it sort of served law enforcement interest to keep everyone thinking that they were on a suicide mission because they were being questioned on the pursuit. Of course they would get up close to the girls and the girls would go into another lane. They'd pull off and then they'd pull up close again and the girls would go into oncoming traffic and it kept repeating itself. The other thing, the Alabama state police investigated it, but they certainly washed their hands of it. It's like they never were involved in the pursuit at all. I mean they just erased any part of that. So, for their own purposes, certainly they wanted to get the minds of people [to think], that it's a suicide mission, there was no way they could have stopped it, they were going to kill themselves anyway. The question is why didn't they do it in the first miles?
A6.Christopher Dunn- Exactly. Why did they drive forty miles to do that?

Q7. Michael Becker- Did you find any explanation for the apparent uniformity of the distribution of the 2.5% across every single category?
A7. Christopher Dunn- NO, no. I was totally surprised by that.
Michael Becker- That's just stunning.
Christopher Dunn- Everything that your lead to believe about teenage and young adult drinking, about men versus women…. So, that's going to take a lot more investigation given the limited amount of social characteristic data in the traffic accident file. It has all kinds of things about the condition of the roadway and position of the vehicles and that sort of thing, very limited amount of social characteristic data. In fact you can't even get race of the driver because it's only coded, for some reason, on occupants of the car. Don't ask me why, but it's in that codebook.

Presentation 3: Trends and characteristics of occupational suicide and homicide in farmers and agricultural workers 1992-2010
Author/Presenter: Wendy Riggenberg

Q1.Becky Block- I have a question about gender. In my work with the census, at least in earlier years, there's a tendency for the farmer to be a man, and adult sons, and all women to have no occupation. I'm just wondering, did that play out with… I mean, if the woman only becomes a farmer when she's a widow then she'll be older… So, what is your thinking about that?
A1. Wendy Riggenberg- Good question. That would be one of the areas we'd love to further investigate. One thing that we did find that was very interesting is that it is estimated that only 45% of farmers claim farming as their profession. So we have 55% of people who are farmers but they have another occupation. Well, what does that mean? Does that mean the wife works off the farm and so doesn't claim farming as the profession? Or where is the distinction

between who's the main person that stays at home and takes care of the livestock and the crops and makes the end decisions? And how much of that is being subsidized by work off the farm? As well as, we have been seeing a trend in recent years were women are actually purchasing farms versus having to come to them as default for being a farmer. Well, that's about what we have been able to drum out up to this point, but it is a provocative question. When we did play out some of these numbers, one thing that we ran into was the same thing that [Kim Voght] ran into, we're not allowed to report on data that falls below a certain number in the crosstabs cell. So, we have some information about women but it's so small, based on the small number. And this is nineteen years of data, in a public health world, not a big outcry. There's a lot of questions that we could be asking on how to deal with small numbers and the lack of interest from the people in the public health realm who are saying: tractor roll overs are going to save more lives.

Q2. Chris Rasche- I was struck by your information on race, and I totally believe the 80% of the farm owners are White. But I was under the impression that we have a tremendous number of migrant workers who would not be considered White today but I know from living in the South for forty years that, in the South if you're anything other than Black then you're counted as White. So, I wondered if you took anything like that into consideration when looking at who the actual farm workers are? Because I don't know what the rules are in various states right now. If they're just doing Black/White, then anyone who's not actually Black is just going to show up as White.
A2. Wendy Riggenberg- Right, this is a compiled category that we created because we didn't have… well, they had seven different categories of ethnicities but I didn't have a significant N number on any of those individually. So, we put them together so that we could show that there really was a difference between those who were a victim of homicide. Although, I wish I had the results in front of me, I'm not sure that the race difference came out as significant simply because of the small N sizes. That is an area we'll have to look into more. It's an interesting point because, are these things being documented?
Chris Rasche- Well exactly, because in terms of migrant workers, certainly for last … years we've been hearing about the extremely harsh conditions in which many migrant workers live and work. It makes you wonder whether or not some things are being considered accidents that are really something else. Labor disputes.
Wendy Riggenberg- Something else that I did not add into the presentation has to do with location of how the sense of … how it defines fatal occupations has to do with, did the act occur during the course of making money. Well if we know that 91-95% of farms are family farms then let's take the assumption further to say people are living on these farms. So if they're living on the farms but they're found dead in their house then that doesn't necessarily categorize as an occupational injury, occupational suicide, occupational homicide. So those would be potential cases that we've lost and that's where it's pretty clear cut as far as that's concerned. If it happens in a silo or if it happens in a barn, then of course it has to do with occupational. If it happens in the house then it's not occupational.

Q3. Adam Pritchard- Coming from a background of studying crime in rural places, you have lack of access to law enforcement, you have a lot of family violence and things like that and it ends up getting resolved in other ways. It might be interesting for you to look at, if you're able,

offender relationships to determine whether or not these homicides are work place conflicts or if they're family violence. I suspect that a lot of these may be more likely to be domestic violence related homicides in rural places without access to shelters, without access to law enforcement. If you think of the early days of domestic violence shelters, one of the most shocking times for shelters was when women stopped murdering their husbands because they were able to leave. In rural places you probably still have the option of.. well the only way out is violence. So it would be interesting to see the victim offender relationship and the context of some of this data if you have the ability to.
A3. Wendy Riggenberg- I want to piggy back on that and say that I had first started this investigation working with a couple of homicide detectives who had come to speak at the University of Iowa and were willing to share the data with me. So, the data, when I asked: Can you tell me what their occupation was? Or Can you tell me if they were a farmer or if they were occupationally employed someplace else? And he took out his excel spread sheet of how ever many pages and he said "I don't have it on the data sheet, [but] I can tell you the ones I remember that I worked on". So you think, we're missing this opportunity to study this. I contacted the general attorneys' office regarding victim assistance and God bless them because they wanted to help and they wanted to send the information. So she sent me a whole excel file of recent homicide victims that they had been working with. While they had no occupational information on it, they, it had all of their social security numbers on it. So that's another instance to me say that we are not working together to create a system so that data can be shared easily and accurately.

Q4. Jeff Osborne- How does the data talk about an employee? Is it a fulltime employee? Cause during harvest season there's an influx of people to help out with that.
A4. Wendy Riggenberg- The Bureau of Labor Statistics collects the data quarterly, I believe. But the Bureau of Labor Statistics run the end of the year results and that's what I used for the data compilation that I have. So, I think you can get it for times a year too but you may count people twice that way and it certainly fluctuates depending on what season it is. So, I waited till the end of the year after BLS determined their final count numbers for the year.

Q5. Amber Scherer- Ok, you might have to forgive me with my lack of knowledge in this area. Are you interested in just the farmers or the farming industry in general? So, my question basically is, could you also look at those individuals who create and build things that have to do with farming and also create those big working factories that contribute to the farming industry? An incident occurred where my father works where a guy, it ended up being an accident, his sweatshirt got caught in one of those big combine machines and he died. So that leads to a multitude of things. It was ruled an accident, but had somebody else been there it could have been a homicide… but nobody else was there. My question basically is, is it just the farm situation you're concerned with or the industry as a whole? You can look across the people that build it, people who…. I think you get my point.
A5. Wendy Riggenberg- My interest has to do with how we count the number of homicides and suicides for people who live and work at the same location. Because that's where we get into a great discrepancy of, are we counting everyone who killed themselves related to an occupation. Because if the farmer kills himself in his house and it's not counted as an occupational thing, but anecdotally you know it has do with his identity as a human being and

what's his purpose on this earth, and is everything going okay? That's the same thing with homicides where if a son kills a father and it has to do with the inheritance of the land, well that's an occupational thing but it happened at the house. Therefore it's not being categorized as occupational. Farmers are also people who work very much by themselves so the isolation makes them, I would think, a potential victim of homicide. Although, as we've established, they're heavily armed. So, what is that? How does being a farmer, someone who works the land, by yourself. Does the isolation mean you don't have a lot of conflict? Or, Does the isolation mean your potentially more a victim of a homicide attack or suicide?

Presentation 4: Not in our community: An exploratory spatial analysis of intimate partner homicide in rural communities.
Authors: Hollianne Marshall & Jordana Navarro
Presenter: Hollianne Marshall

Q1 & A1.
Becky Block- Could you talk a little bit more about the definition of shelters? Did you say Federal shelters?
Hollianne Marshall - Well there are shelters that have any kind of federal funding supporting their existence. So we just labeled them as federal.
Becky Block- You did that back on 2000? (Yes) Correct… ok. When you did the rates for shelters, was it population based rates?
Hollianne Marshall- Yes it was per 100,000 individuals.
Becky Block- Ok, so in a less dense area people might have to travel further. Did you measure that?
Hollianne Marshall - We did not measure that. But we assumed that would be the case. That there might be more shelters per 100,000 people but that it would be down the street from where you lived.

Q2. Kim Davies - In looking at intimate partner homicide, could a male or female be a victim? And did you do any analysis where you looked at this?
A2. Hollianne Marshall- Yes, we did. We had differences. So, male victimization was much higher in the urban counties over female victimization. So we did break that down just to see, sort of exploring the data.

Q3. Pawel Waszkiewicz - Was it just the number of shelters or did you calculate the number of places in shelters per 100,000?
A3. Hollianne Marshall- We did the count of shelters and then we did the number of shelters per 100,000.

Q4. Dick Block- This kind of research I always ask, what's rural? And what's urban? Especially in a fast growing state there is a spill over into, up in the northwest corner of California is really rural, but spillover into the urban areas, of the urban areas into rural areas. There's also areas that the ruralness is predominantly recreational. That are typically quite different than rural areas that are agricultural or whatever… So, there are a lot of different rural

areas with different characteristics and dividing it just by 58 counties, into two categories might give you a distorted image…
A4. Hollianne Marshall - Right, which is why we're working on different data. We were just exploring these data. But the data came to us already separated and we used the census definition which are counties that are 250,000 or less with no city that has larger than 50,000 population.

--Unknown, From the group: That's not very rural…
--Lin Huff-Corzine: We agree..
Dick Block- In addition, I think that in California that the touristy areas or the retirement areas would become really important issues. So you might want to look at some of the more …. Census definitions. You can get that kind of divvying up, the counties into touristy areas. Which there certainly are in California and sort of retirement areas. They have different services than rural areas, farming areas that are way up in the mountains.

Q5. Wendy Ringgenberg- I had a question, it's a follow up on what I think Pawel had said, wondering about occupancy. So, which area has the greatest occupancy usage? So would the greater number of shelters be influenced by greater need?
Hollianne Marshall- That we did not have in these data. That is something we're hoping to address in future projects.

Added suggestions.
Trisha Whitmire- Something else to consider is that for the shelters that are in the rural areas. One of the reasons that we might be out there is to keep the confidentiality and to be further away from the places. So maybe you could get from either the shelters themselves or the state department some sort of data on counties that people are staying there come from, cause, most likely, they might come from the urban areas but they're going away for their safety. Also, we were talking about the capacity. The capacity is very important because might have a bunch of rural shelters that only have a couple beds each and then you have urban ones that have hundreds of beds.

Adam Pritchard- I like this idea, I like what you're doing here and I like that you're going to continue on and expand this. I wanted to give you a suggestion that might mitigate what other people have said here about the definition of rural, which obviously there's some basic rural sociology and I've gotten into with a lot of rural sociologists about what rural is and is not. And I want to point you toward a couple things that I 'm not sure you're aware of: the economic research/resource service (ERS). It has a rural urban continuum which is a set of nine codes that go through various things like proximity to a metropolitan statistical area, and things like that, population size/density. So they actually have a continuum, of, it's like three categories of rural and three categories of suburban or urban. That may be a more nuanced way to look at rurality that gets at smaller places and then there's another… I think it's a twelve point scale that's called the urban influence codes. So you might want to look at those two codes as a definition of rurality that gets more at the nuance of US counties. I think you can break some of these down. So I want to suggest this to you as a way, as you move forward, to further distinguish rural from urban.

Q6. Adam Pritchard - The second point, your counter intuitive finding of lower rates of violence in a rural place. I wanted to ask you, do you think that's an actual reflection of the incidents or if that's a, maybe, an artifact of/ with… potentially, given the other literature on rurality, would fewer services with fewer access to say smaller police departments and things like that. Is it less reported but maybe more prevalent. Have thought about comparing to maybe the NCVS or something like that?
A6.Hollianne Marshall- Yes, we have. Because we absolutely think that this is due in large part to how it's reported in those areas and we didn't see anything significantly different as far as how law enforcement proceeds in either rural or urban counties but we do think that there is an element of labeling it differently than what it actually is in those counties.

Q7. Dallas Drake- So, these are in California? (Yes) And you have a much higher rate of female victimization. I'm wondering, what percentage of the females might be lesbian?
A7. Hollianne Marshall- That, we don't know. That's a good question.
Lin Huff-Corzine- All good things to look at. Chris, did you have a question?

Q8. Chris Rasche- Yes, if I manage to fire a synapse. Both, it's California first of all and secondly, that the alternative family patterns, I wonder to what degree rural, again you see the issue of how you define rural, but also includes very high value celebrity enclaves where violence may not come to light in the same way as it would in your normal middle class and/or might be handled differently by the local authorities. I don't know that there's necessarily a larger percentage of celebrities in California than … well, it sounds good to me, I don't know but you know what I'm saying. There are some Wyoming and California and some of these places have what we would often call rural at first glance, but they actually have very large, very expensive celebrity homes, and I just wondered if that's a factor that you thought about?
A8. Hollianne Marshall- We did consider the celebrity factor but we considered. It's just that in rural areas the dynamics are different as far as reporting the homicides as intimate partner versus some other type of death. So we do think that, that's definitely a part of these results.
Chris Rasche- And alternative family structures?
Hollianne Marshall- Right. Absolutely.

Q9. Kim Davies- But, and you guys can help me, isn't this actually, with some volition, shows were shelters are higher, we see male victims to be lower and that's what you're finding here as well, right?
Hollianne Marshall and Crowd- multiple yes's
Kim Davies- And the other thing I know about the rural is that there's a Sheriff who's a cop and a Sheriff who's a woman and that might be. If you watch any of the movies. It's always a female. As long as we're talking about celebrities.
Lin Huff-Corzine- We might not be able to look at celebrity but we might be able to look at income or SES. Any other questions before we take a break? Ok.
End of Q & A for Panel Session 4: Subtypes of Homicide

Panel Session 5: The Aftermath of Homicide: Responses and Prevention

Chair: Dallas Drake – Recorder: Michelle Craske

Homicide Survivors: A Literature Review

Kim Davies, Georgia Regents University

Millions of people have been impacted by the death of a loved one through homicide. Most often known as "homicide survivors" or as "co-victims," those who have had family members murdered are an understudied group for criminologists. Over the past couple of years, Lin Huff-Corzine and others have noted that the study of homicide survivors is an overlooked area of homicide research. Here, I present a brief overview of the empirical research published in the last 10 years (2005-2015); discuss possible avenues of for further research for homicide researchers; and discuss some of the possible challenges and hesitancies in examining this particular population.

Much of the literature uses the term "homicide survivor" to refer to individuals whose family or friends have been murdered. "Co-victims" and "vicarious victims" are also terms used in the literature (Davies, 2007; Weaver et al., 2014). It may be of particular importance for those of us who study criminology to be aware that in the bereavement literature, vehicular homicide is often included with criminal homicide. For example, Rheingold et al. (2012) report that 9% of their sample lost family or friends to criminal homicide, 7% lost to vehicular homicide and 2% lost to both.

Overview of Literature, 2005-2015

This review is limited to peer-reviewed studies published in journals in English between 2005 and the time this review was written in 2015 (May). I located articles for inclusion in the review by using Ebscohost and Google Scholar search engines. I made searches for the following terms in various combinations: homicide/murder survivors, homicide/murder co-victims, homicide/murder vicarious victims, and "bereaved by homicide." In all, the searches generated 27 different articles and I have located 24 of these articles. I read all of the articles, but did not include all in the literature review. There were some articles that were not research articles and in other cases, I had reached the point of saturation of information.

While there are different ways that one could organize a review of the literature on homicide survivors, I have grouped it by social institution. The studies are grouped within three major social institutions: Health Care, Religion, or the Criminal Justice System; though there is overlap and religion is not necessarily treated as a social institution in the literature.

Health Care

The research that is within the area of health care is focused on bereavement and what is considered to be healthy versus unhealthy manifestations of grief. There are two terms or concepts used to in explanations of grief among homicide survivors: complicated grief and sense making. Post-traumatic stress syndrome, depression, drug use, and alcohol abuse are also issues discussed as they relate to survivors.

Complicated grief has been defined as "an extended, incapacitating, and sometimes life-threatening grief response" (Neimeyer and Burke 2011). "Sense-making" refers to the way that individuals come to understand or "make sense of" the death of their loved one that helps them to adjust to their new life without their loved one. Adjustment in this way is healthy as opposed to a failure to adjust or complicated grief (Stretesky et al. 2010). Currier, et al., (2006) make comparisons in sense-making among a college sample of those who had lost loved ones to violent and non-violent death and sudden and expected death. Those who loved ones perished in violent deaths as compared to non-violent and those who suffered loss in sudden versus expected death were less successful in sense-making and thus had more complicated grief. No differences were found in those who lost loved ones to homicide in comparison to those who had lost loved ones to suicide nor did they find difference between sudden deaths of "volition" (homicide and suicide) and deaths due to random outside forces. Out the same year, Armour's 2006 work, explains Currier et al.'s findings. Using the existing literature she explains that sudden death is more difficult than expected and when a death is violent, it makes the trauma even more difficult for a survivor.

In their review of the literature, Hertz, Prothrow-Stith, and Chery (2005) noted homicide survivors experience a variety of health difficulties similar to Post Traumatic Stress Syndorme (PTSD). In a 2011 study of 54 African American survivors who mostly lost children to murder, PTSD was not uncommon with 18.5% screening positive for PTSD (McDevitt-Murphy et al., 2011). Similarly, but more pointedly, Zinzow et al. (2011) in their study of U.S. representative sample of adolescent survivors found that in comparison to survivors of other interpersonal violence, homicide survivors were more likely to meet criteria for PTSD symptom clusters. A 2011 study of PTSD in Japanese families provides an interesting departure from the other studies on PTSD and homicide survivors. Ogata et al (2011) found that some symptoms of PTSD were not different for those who lost loved ones due to natural death as compared to murder or suicide. Though, avoidance behaviors were more highly correlated with homicide survivors who lost their relatives other than children, parents, or spouses. Finally, losing one's spouse was most traumatic regardless of manner of death.

Zinzow and Rheingold et al. (2009) found that adolescent survivors of homicide are more likely to suffer from depression and they are more likely to abuse drugs than adolescents who have not lost a love one to homicide. But, homicide survivors were not more likely to report past-year alcohol abuse or dependence in comparison with non-victims. In their 2012 study, however, when Rheingold and Zinzow et al. (2012) controlled for demographic variables and exposure to violence, they found that survivors of homicide are more likely to suffer from depression and they are more likely to abuse drugs and alcohol than adolescents

who haven't lost a love one to homicide. Similarly, in a qualitative study of African American survivors of homicide (and suicide), Sharpe, Joe, and Taylor (2013) found that survivors used alcohol and drugs to numb the pain of the loss of their loved ones. And in the study reported above by McDevitt-Murphy et al., (2011), 54% of the 54 African Americans in the study had scores on the Beck Depression Inventory that suggested at least mild depression.

Religion

In a qualitative study, Sharpe, Joe, and Taylor (2013) found that African American homicide survivors reported that they received support from personal relationships but also from group or individual counseling as well as spiritual coping especially through prayer. Wellman (2014) also considered the role of religion in her qualitative study of 24 cold case homicide survivors. She found that for 20 of the survivors religion played a role in the grief process. Their faith gave them hope and they were better able to cope with the cold cases as they anticipated that one day they would have answers to the unsolved cases. Burke et al.'s 2011 study compared African American homicide survivors who engaged in positive religious coping (PRC) and negative religious coping (NRC) (anger toward God; questioning God's power and feeling spiritually abandoned). They found that NRC was positively linked to complicated grief while PRG did not have a significant relationship to bereavement outcome. And in a follow up study, the same researchers (Niemeyer and Burke 2011) found a link between NRC and all forms of bereavement distress (PTSD, depression, and complicated grief) but no links between positive religious coping and bereavement.

Criminal Justice System (CJS)

While Stretesky et al. (2010) focus on sense making which is part of the bereavement literature; they interviewed 37 co-victims about their interactions with police and prosecutors. Using grounded theory, Stretesky et al. (2010) learned that the survivors often viewed criminal justice workers as impediments to learning about their loved one's homicides and ultimately to achieving justice. Characteristics of the victim including race, ethnicity, drug status, or work (e.g. prostitution) were also seen by co-victims as explanations for a lack of attention to some cases by survivors. Malone's 2007 study involving survivors and victim support personnel, police family liaison officers and probation service victim liaison officers in England is in line with U.S. studies that find that having information, a sense of control, and positive interactions with CJS personnel is related to less traumatic bereavement for victims.

Armour and Umbreit's 2012 study of sentencing and homicide survivors is unique and thought-provoking. They compare survivors in Minnesota and Texas as a way to study the effect of two types of "the ultimate penal sanction" which in Minnesota was LWOP (life without option of parole) and the death penalty in Texas. While the study which relied on interviews with survivors in both states indicated that the ultimate penal sentence in each state provided a sense of justice and satisfaction, what helped survivors more was having a sense of control over their lives. Positive interactions with CJS workers and having ta chance to express their wishes and being respected were correlated with a sense of justice. Being able to give a Victim Impact Statement (VIS) was seen as a positive thing by all survivors even if they did not always like how the offender reacted. In Texas the VIS is made after sentencing and in Minnesota it is given at sentencing but there were no differences found in terms of victim's

satisfaction with the VIS in the two states. The sense of control for survivors however was challenged by appeals. In Texas, with the death penalty, these appeals could be very long and thus Texans had more of an issue with closure than Minnesotans who saw the LWOP sentence as the endpoint. Still, Armour and Umbreit (2012) report that the Minnesota survivors, themselves did not appear to notice or value the difference in their earlier closure.

Areas of Possible Exploration

An important lesson or practice that homicide researchers can bring to the study of survivors is that of disaggregation. We have learned that demographic variables are often important to the study of homicide and so too, may they be important to the study of survivors. Many studies already note that women, African Americans, and/or Hispanics may be overrepresented among survivors (Rheingold et al., 2012; Zinzow et al, 2011) and some of the studies focus solely on African American survivors. Moreover, we know the value of studying different homicide circumstances or victim-offender relationships. Only one study that I found disaggregated by victim relationship and that was the Ogata et al., study of Japanese survivors. It would be interesting and potentially valuable to learn whether survivors varied by relationship in the U.S. and other parts of the world as well. Some therapeutic literature has noted that homicide bereavement is sometimes complicated by the fact that murder victims and offenders are in the same family but I found no studies in this time period that addressed possible differences. Wellman (2014) studied cold case homicides and Armour and Umbreit considered case outcome, which are worth further investigation and similarly, homicide circumstance may be relevant. Armour and Umbreit also noted that they had some individuals in their study who had filed wrongful death suits in civil court – this could be an interesting avenue for study considering the positive correlation between feelings of control and healthy grieving.

Challenges to Studying Homicide Survivors

This literature review is a first step in a project about homicide survivors that I am developing with a colleague who has strengths in qualitative research and victim advocacy research. We are considering studying meaning making and an online mutual bereavement support groups. But one of our concerns is the population we are focusing on. While adult homicide survivors are not technically a vulnerable population, we believe that we must take the utmost care in studying any population that we have the potential to further traumatize. The motivation for our research is something we should expect them to question and something for which we should have good answers. I have met many people who are homicide survivors and I some have shared with me their anger at being asked what they thought were insensitive questions by researchers. I think we need to do studies that will help us all better understand homicide survivors and bring attention to their needs while doing what we can to help those suffering from grief of losing a loved one but we need to tread carefully.

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Family and Other Survivors of Line of Duty Deaths of Law Enforcement Officers

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Abstract

When a death occurs, the impact is not limited solely to the deceased. Be they referred to as survivors, co-victims, or secondary/tertiary victims, family members and friends, co-workers, and other acquaintances are no doubt affected, particularly if the death is sudden and unexpected. Among first responders, there is also a sense of collective loss based in part on a shared identity. This exploratory study seeks to examine primary and secondary victimization related to line of duty deaths of police officers. Data for 2014 are compiled from a number of sources to assist in estimating the number of persons potentially affected by the LODD and also to identify various relationships (e.g. professional, personal, etc.) with the deceased. Results will be utilized to provide a foundation for developing a categorization scheme for secondary and tertiary victimization among survivors.

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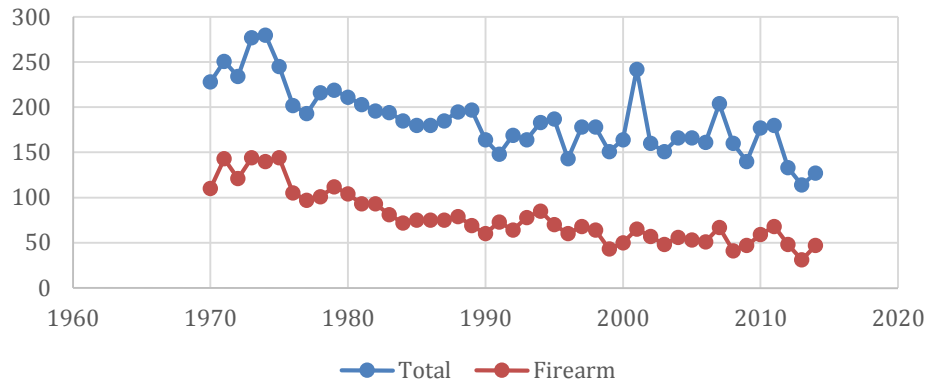
INTRODUCTION

According to data compiled by the Officer Down Memorial Page (www.odmp.org) in 2014, 127 law enforcement officers died in the line of duty, compared with 114 for the previous year. Of particular interest is the spike in non-accidental, firearm-related fatalities in 2014 (47 of 127, or 37 percent of total) from 2013 (31 of 114, or 27 percent of total). Similarly, in an 11 May press release of preliminary 2014 data the FBI highlights a marked increase in felonious law enforcement deaths since 2013.[7] Not surprisingly, this issue receives much interest among the law enforcement community and among their supporters, resulting in calls for "something to be done" and frequently employing terms such as crisis, epidemic, etc. However, as shown in Figure 1, current figures – when viewed as part of long term trends – reveal a different and to some, a surprising pattern.[8] Both total and firearm line of duty deaths have generally declined since 1973, with the notable exception occurring in 2001 (for total deaths).

Figure 1: Total and Firearm (Non-accidental) LODD, 1970-2014



Furthermore, there are gaps in information related to line of duty deaths, in part a function of the data source used. Weaver, Huff-Corzine, Tetzlaff-Bemiller, and Scherer (2014) note the necessity of reviewing multiple sources in order to determine consistency of information as well to augment details omitted from a specific source. This information is critical, not only in terms of understanding the dynamics of LODD incidents, but also in terms of targeting responses and/or training to those officers who are most vulnerable. For example, Tucker-Gail, Selman, Kobolt, and Hill (2008), in an analysis of 1995-1999 FBI Law Enforcement Officers Killed and Assaulted (LEOKA) data, suggest that officers who are between the ages of 30-39 and have less than five years of experience are at the greatest risk.

[7] http://www.fbi.gov/news/pressrel/press-releases/fbi-releases-2014-preliminary-statistics-for-law-enforcement-officers-killed-in-the-line-of-duty (Accessed 11 May 2015).

[8] Source: http://www.odmp.org/search/year/ (Last Accessed and Compiled 8 May 2015)

The following table presents a comparison of data for 2013 (most recent year for which comparable data are available) from the Officer Down Memorial Page and the LEOKA program, respectively. It is important to remember the latter employs a more restrictive definition, counting only those incidents in which an officer was killed during the course of a felony incident.

Table 1: Comparison of ODMP and LEOKA (FBI) Data for Line of Duty Deaths, 2013.

Variable	ODMP[9]	LEOKA[10]
Number of Deaths	119	27
Most Frequent Month of Occurrence	December (14)	February and December (5 each)
Gender (Male/Female)	112/7	25/2
Age	43	39
Tenure (Average)	14 Years, 6 Months	13 Years

Numerous studies point out that line of duty deaths have a marked impact on family members, departments, and communities. Preventing and reducing line of duty deaths is paramount, but it is also important to not forget what occurs later. In a post-9/11Concerns of Police Survivors study, Bear and Barnes (n.d.) point out that the surviving spouse is often the center of attention in the period leading up to the funeral. However, Finn and Tomz (1996) also contend that surviving spouses and other family members are oftentimes forgotten and/or unintentionally ignored following the death of the officer, particularly after the first year.

According to Redmond (1989), there are between seven and ten family survivors following a homicide, which does not include extended family, friends, and neighbors, among others. In terms of line of duty deaths, this figure is likely an underestimate. It is important to keep in mind that in the arguably closed culture associated with law enforcement, shared identity influences and accentuates a sense of loss even among persons not acquainted with the deceased (DeSoir, 2012). For example, it is estimated that on 8 May over 20,000 police officers from all over the country attended the funeral of Brian Moore, a NYPD officer who was killed in the line of duty.[11] No doubt, the current, emotionally-charged controversy related to strained police – community relationship played a role. However, it does illustrate that the number of persons affected by the death may go well beyond family members, friends, and department or agency colleagues. One purpose of this research is to identify and various

[9] Source: http://www.odmp.org/search/year?year=2013 (Last Accessed 18 May 2015)
[10] Source: http://www.fbi.gov/about-us/cjis/ucr/leoka/2013/officers-feloniously-killed/felonious_topic_page_-2013 (Last Accessed 18 May 2015)
[11] http://www.wsj.com/articles/thousands-attend-funeral-for-new-york-city-police-officer-1431101172 (Accessed 13 May 2015).

categories of secondary victims and to attempt to clarify the distinction between secondary and tertiary victims among this group.

DATA AND METHODS

Data for the present study are compiled from multiple sources. Summaries of line of duty deaths for 2014 as listed on the *Officer Down Memorial Page* comprise the first source of information. The second source includes cross-referencing the LODD on other outlets, including the National Law Enforcement Officers Memorial Fund and PoliceOne.com.[12] The third data source utilized includes the local newspaper obituary of the deceased. Also, 2013 agency-level information from the Uniform Crime Reports (UCR), including number of sworn officers, total personnel, and estimated population, is included.

Variables included in the present study are: Date of Incident; Day of Week; Officer Age (in years); Officer Gender; Rank (1=Trainee; 2=Reserve Deputy/Officer/Trooper; 3=Deputy/Officer/Trooper; 4=Detective/Investigator; 5=Supervisor; 6=Administrative/Support; 7=Sheriff/Chief/Director); Marital Status (1=Single; 2=Married; 3=Separated/Divorced; 4=Widow/Widower; 5=Other; 6=Unknown); Number of Children (Living); Number of Siblings (Living); Years of Service; Number of LODD in Department/Agency; Circumstances of Death (1=; Assault; 2=Automobile Accident; 3=Drowning; 4=Duty-related Illness; 5=Fire; 6=Gunfire; 7=Gunfire (Accidental); 8=Heart Attack; 9=Motorcycle Accident; 10=Struck By Vehicle; 11=Vehicle Pursuit; 12=Vehicular Assault); whether the LODD is classified as an Ambush; Sworn Personnel in Department; Total Department/Agency Employees; and Estimated Population.

The first step of analysis will consist of descriptive statistics for line of duty deaths in 2014 in order to identify officer and department/agency information, characteristics of the incident, as well as to begin the process of determining categories of survivors.

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Can Comprehensive Domestic Violence Strangulation Prevention and Response Efforts Prevent Homicide?

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ABSTRACT

While strangulation has long been identified as a mode of intimate partner homicide, only in the past fifteen hears have researchers begun to systematically examine non-fatal strangulation in domestic violence as a stand-alone topic. This growing area of research suggests that non-fatal strangulation may be much more common that previously understood, especially in high-risk domestic violence contexts. A history of strangulation is associated with severe domestic violence, including a much higher prevalence among homicide and attempted homicide cases (Glass et al., 2008). This article explores the possibility of implementing a comprehensive, multi-agency response to strangulation in domestic violence cases in order to successfully intervene in high-risk domestic violence cases and prevent potential homicide. The possibilities for estimating homicide risk reduction as part of a strangulation prevention pilot program in Brevard County, Florida are explored. This article discusses the roles of various agency partners including law enforcement, public health officials, university researchers, and domestic violence advocates in creating a comprehensive strategy for identifying, responding to, and preventing strangulation within the community. The potential challenges for developing strong measures of homicide risk reduction and for implementing similar programs in other jurisdictions are also discussed.

Introduction & Background

The recent expansion of research on incidents of non-fatal strangulation as a part of domestic violence began with the 2001 publication of a landmark study in the *Journal of Emergency Medicine* by Gael Strack, George McClane, and Dean Hawley. In this special issue, these authors outlined legal, clinical, and forensic issues associated with the detection and successful prosecution of strangulation-related injuries in domestic violence cases. Their study, along with other articles in this special issue, highlighted a largely overlooked area of research within the study of domestic violence: the serious gaps in our understandings of symptomology, prevalence, and systemic responses to non-fatal strangulation assaults. Since this time, research has highlighted the incidence of prior strangulation as a precursor to intimate partner homicide (Campbell, Glass, Sharps, Laughon, & Bloom, 2007; Glass et al., 2008), linked strangulation to the risk of delayed death (Di Paolo et al., 2009), and has resulted in the development of strangulation-specific criminal statutes in most U.S. states (Laughon, Glass, & Worrell, 2009). From medical and law enforcement standpoints, clinical best practices for surviving victims and investigative techniques for collecting evidence of strangulation have also improved dramatically (Faugno, Waszak, Strack, Brooks, & Gwinn, 2013; Training Institute on Strangulation Prevention & California District Attorneys Association, 2013).

The link between incidents of strangulation and intimate partner homicide has been one of the most significant findings on this topic. Glass and colleagues (2008) in a case-controlled study of 933 domestic violence cases across 11 cities involving abuse, homicide, or attempted homicide found that a history of strangulation was one of the strongest predictors of intimate partner homicide. Women who had experienced strangulation were 7.48 times more likely to killed, compared to other abused women, and a history of strangulation was present in 45% of attempted homicide and 43% of homicide cases. Strangulation is one of the well-validated factors in the widely used Danger Assessment instrument used to predict intimate partner homicide (Campbell, Webster, & Glass, 2009), and recent research as linked strangulation to severe forms of coercive control in domestic abuse (Bergin & Berkowitz, 2012; Joshi, Thomas, & Sorenson, 2012; Nemeth, Bonomi, Lee, & Ludwin, 2012; Thomas, Joshi, & Sorenson, 2014) and attempted homicide (Strack & Gwinn, 2011). Given that the National Violence Against Women Survey (NVAWS) estimated that 6.1% of women and 0.5% of men report having experienced strangulation by an intimate partner, addressing strangulation as a part of homicide risk can have a significant impact on the lives of domestic violence survivors, and in particular women.

The recent growth in research and policy aimed at identifying, treating, investigating, and prosecuting strangulation in domestic violence cases has also highlighted a new opportunity to develop community-based practices aimed at preventing intimate partner homicide. At least 43 states now have criminal statues relating to strangulation, 19 of which are strangulation-specific and most elevate this form of assault to a felony. Despite the recent expansion of legal statutes (all of which were added after 2000), few law enforcement agencies or forensic medical practitioners are specifically trained on strangulation. Efforts by the Training Institute on Strangulation Prevention (http://www.strangulationtraininginstitute.com/) are beginning to address this important need, but these efforts could be greatly expanded by widening the approach to addressing strangulation beyond simply improving the medical or law enforcement responses after a serious assault has occurred. Our paper outlines some initial challenges to creating a comprehensive strangulation prevention program within a community.

Framing the Problem

The classic organizational framework theory first developed in 1984 by Bolman & Deal (2008) can be used to guide the design of a comprehensive program to address strangulation within a community. Their framework examines four key frames through which organizational effectiveness can be evaluated: the structural frame, the human resources frame, the political frame, and the symbolic frame. In the context of improving a community's response to strangulation, these concepts can be broadened to examine not only the effectiveness of a single responsible organization (e.g., a law enforcement agency) but can more generally frame the challenges of a community response. For instance, challenges identified within the structural frame may include the lack of documented policies and procedures that instruct representatives of individual agencies (e.g., patrol officers, nurses, prosecutors) on both how to carry out their individual role *and* how to coordinate across agencies. The human resources frame might include training within and between agencies (e.g., including law enforcement and medical first responders), while challenges within the political frame might include negotiating

funding sources when there are multiple involved agencies (e.g., law enforcement referrals to forensic medical examinations). In the context of domestic violence prevention, challenges identified through the symbolic frame include the ability to assure victims that the systemic response with reduce rather than increase risk of re-victimization – an especially difficult challenge in contexts of ongoing abuse and coercive control.

By broadening the scope of this framework from intra-agency to inter-agency, a community model for coordinating a response to strangulation in domestic violence can develop an ultimate goal of being successful at both response and prevention, particularly with regard to the potential for abuse to escalate to homicide. While preventing strangulation as a part of domestic violence may be extremely difficult to accomplish on its own, informing and protecting victims of non-fatal strangulation while effectively prosecuting offenders can conceivably prevent a number of serious abuse cases from eventually becoming homicide cases.

The Brevard County Strangulation Prevention Workgroup

Building the framework introduced above, Brevard County, Florida has begun to develop a comprehensive inter-agency workgroup to coordinate a community-wide response and prevention effort around the issue of domestic violence strangulation. The workgroup consists of the Brevard County Sheriff's Office Special Victim's Unit, the Domestic Violence Division of the Office of the State Attorney, the Florida Department of Health in Brevard County, Sexual Assault Victim Services, Serene Harbor and the Salvation Army domestic violence shelters, and researchers from the University of Central Florida. Beginning in June 2014, this workgroup has facilitated collaboration between key agencies, in particular the Sheriff's Office and Health Department, to be able to provide the training and coordination necessary to offer forensic medical examinations to victims of strangulation identified and referred by law enforcement officers during domestic violence calls. The domestic violence shelters have committed to providing a safe location for the exams to take place, while university researchers are providing pilot data, ongoing evaluation, and grant writing support for the program.

The efforts of this workgroup will provide a model for inter-agency coordination around the problem of strangulation in domestic violence cases that could serve as a de facto homicide prevention program if successful. There are a number of avenues through which this project can be directly framed as homicide prevention:

1. Improving the criminal justice response to strangulation. If law enforcement officers are trained to screen for strangulation symptoms and can refer victims to a forensic medical examination to collect physical evidence, then evidence-based prosecution of strangulation cases at a felony rather than misdemeanor level is possible. Better recognition and prosecution of these cases removes an abuser from a household, and may reduce the risk of future violence, including homicide, for the survivor.

2. Disseminating information through shelter involvement. By including shelters as active partners in trainings and the administration of strangulation exams, increased coordination between law enforcement, health officials, and shelters can be encouraged.

Likewise, shelter directors and advocates will become more informed about the prevalence and risks associated with strangulation. This information will lead to more strangulation screening among survivors who do not have contact with law enforcement, and potentially more community and survivor awareness of the increased homicide risk associated with this specific form of domestic abuse.

3. Research, evaluation, and dissemination of information through research partnerships. The partnership with university researchers can assist the workgroup in identifying best practices, conducting systematic evaluations of policies and procedures, as well as provide data useful for publicizing project successes. If done well, this component could help develop strategies to empirically demonstrate homicide risk reduction and facilitate broader adoption of this model across other communities.

Conclusion

The framing of strangulation response and prevention efforts as reducing intimate partner homicide risk is supported by research literature, and may be an effective strategy through which to promote better response and coordination between agencies with regards to domestic violence. At the very least, a focus on strangulation represents a promising avenue through which severe and potentially lethal domestic violence can be reduced. Moving forward, a key challenge for researchers will be to develop effective means to measure and evaluate the risk reduction afforded by this type of program that can be useful in political and institutional contexts to expand and disseminate programs like this one.

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Panel Session 6: ***Analyzing Homicide Crime Scenes and Behaviors***

Chair: Kim Davies – Recorder: Lauren Wright

Exploration of juvenile homicide crime-scene actions in the French-speaking part of Belgium

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Introduction

Offenders' crime-scene actions have been explored with regard to arson (Canter & Fritzon, 1998), sexual offending (Proulx, Aubut, Perron & McKibben, 1994), and homicide (Santilla, Häkkänen, Canter & Elfgren, 2003). However, to date, they have not been considered in great depth with regard to juvenile homicide.

Salfati and her colleagues demonstrate in several studies the usefulness of differentiating the crime-scene actions of homicide cases and the offenders' background characteristics according to their expressive or instrumental nature (Salfati, 2000; Salfati & Dupont, 2006; Salfati & Haratsis, 2001). In a study of 247 British single-offender, single-victim solved homicides, Salfati (2000) shows that expressive homicide offenses involve extreme physical attacks in which the offender reveals prior knowledge of the victim. Conversely, instrumental homicide offenses suggest that the victim is seen as an object with which the offender can achieve a criminal aim (e.g., sexual assault or theft). Salfati (2000) emphasizes the importance of interpreting behaviors in a thematic way, rather than singularly and out of context. This theoretical approach has been used successfully to unravel the meaning of homicidal acts by focusing on the role of the victim to the offender (e.g., Salfati, 2000; Salfati & Canter, 1999). Salfati and Canter (1999) differentiated homicide crime-scenes according to three themes: Expressive (Impulsive), Instrumental (Opportunistic), and Instrumental (Cognitive). They found that these three themes were linked to the background characteristics of the offender (e.g., previous convictions).

Numerous studies have shown that expressive and instrumental aggression is associated with different homicide crime-scene actions (Salfati, 2000; Salfati & Canter, 1999; Salfati & Dupont, 2006; Salfati & Haratsis, 2001; Santilla, Canter, Elfgren & Häkkänen, 2001). Following Salfati's (2000) initial work, Salfati and Dupont (2006), Salfati and Haratsis (2001), Salfati and Park (2007), and Santilla et al. (2001) have continued to test the expressive-instrumental model using national samples from other countries. They have found the expressive-instrumental dichotomy to be a useful model that is applicable to different countries and cultures (e.g., Canada, Finland, Greece, and Korea).

In Belgium, the Belgian Penal Code (Beernaert, Tulkens & Vandermeersch, 2008) defines homicide as the killing of another human being which can be a voluntary (murder and

assassination) or involuntary act (manslaughter). Data on the rate of juvenile homicide in Belgium are difficult to obtain. Where data are available, they cannot be compared because they are spread across diverse federal, regional and local databases (Van Dijk, Dumortier & Eliaerts, 2006).

The present study will focus on crime-scene actions involving Belgian juvenile homicide offenders. As offenders charged with homicide share similar characteristics as those charged with attempted homicide (Heide, 2003), the study will examine both voluntary homicide and attempted homicide cases. The study will explore the thematic interpretation of crime-scene actions, as well as the usefulness and applicability of the expressive-instrumental dichotomy when considering juvenile homicide committed in Wallonia and Brussels. Additionally, the study will investigate whether offender characteristics can be inferred from crime-scene actions in this sample of offenders.

Method

Sample

The sample consisted of 57 cases of murder or attempted murder that took place between 1995 and 2009 in Wallonia and Brussels. There were 67 offenders, all aged 21 or below. Of these offenders, 41 were charged with murder and 26 were charged with attempted murder. A total of 64 victims were killed.

Data collection

Three sources were used to collect data, namely, the Violent Crime Linkage Analysis System (ViCLAS) and the police, the courts, and open sources (e.g., media documents and online material). The data were coded dichotomously, using a coding dictionary that was developed based on previous studies of homicide crime-scene actions (Salfati, 2000; Salfati & Canter, 1999; Salfati & Haratsis, 2001; Santilla et al., 2001) and an examination of the content of the case files.

Data analysis

Smallest Space Analysis (SSA; Guttman, 1954) was used to analyze the data. This is a non-metric multidimensional scaling procedure that converts a correlation matrix into points in a geometric space. Each point signifies a crime-scene action; and the higher the correlation between particular actions, the smaller the distance between them in the related space. As the correlations were between dichotomous variables, they were inter-correlated using Jaccard's coefficient. The degree of fit between the points in the SSA plot and the actual correlations is indicated by Guttman-Lingoes' coefficient of alienation. The closer the coefficient of alienation is to zero and fewer iterations generally suggests a better fit (Shye, Elizur & Hoffman, 1994).

The specificity of the thematic split in the SSA plot was examined using a method of proportionality, where a case is assigned to a dominant theme (Salfati & Canter, 1999). Consequently, each case was classified as belonging to a particular theme if the percentage of variables occurring in that thematic region was greater than the sum of the other thematic regions.

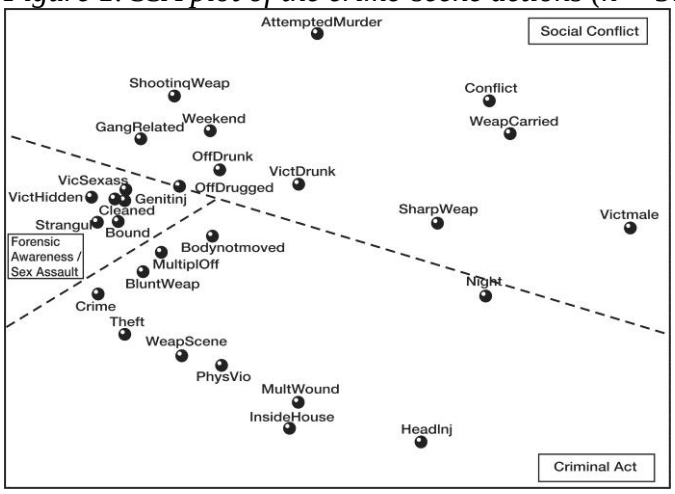
Finally, Fisher's exact test (Fisher, 1922) was used to determine the relationship between the thematic regions of the SSA plot and the offender-victim relationship, offender characteristics, and the offenders' criminal history. Due to multiple tests being conducted, an adjusted alpha level was adopted (Bonferroni correction: $p = .004$).

Results

Figure 1 illustrates the correlations between the crime-scene actions explored in this study. The plot is the vector 1 by vector 2 (front face) projection of the three-dimensional representation. This representation was used because it had the lowest Guttman-Lingoes' coefficient of alienation, namely .14 in 20 iterations.

The SSA plot shows three thematic regions of crime-scene actions. Due to the way in which the variables are grouped, the regions can be labelled clockwise as: Social Conflict, Criminal Act and Forensic Awareness/Sex Assault. Although the plot has been separated into regions, the lines should not be seen as fixed boundaries, but instead showing gradual changes relating to crime-scene actions involving social conflict, overtly criminal acts, and forensic awareness or sexual assault.

Figure 1. SSA plot of the crime-scene actions (n = 57)



The region entitled 'Social Conflict' (KR-20 = .45) consists of eleven variables. These are: the victim was male (77%), the victim had drunk alcohol (77%), the offender carried a weapon (54%), a sharp weapon was used (51%), there was offender-victim conflict (49%), a murder was attempted (37%), the offender used drugs before the offense (30%), the offense occurred during the week-end (28%), the offender had drunk alcohol (23%), a shooting weapon was used (17%), and the offense was gang-related (10%). The grouping of these variables suggests the occurrence of a conflict during some form of social encounter.

The 'Criminal Act' region (KR-20 = .69) includes 11 variables. These are: head injury (70%), the offense occurred at night (58%), multiple wounds (53%), the offense took place inside a house (51%), physical violence (46%), the weapon was taken from the crime-scene (40%), the

body was left at the scene (35%), theft occurred (33%), multiple offenders were involved (28%), a blunt weapon was used (23%), and the offender intended to commit some form of crime (23%). This thematic region highlights overtly criminal actions, where the offender may have a more instrumental aim (e.g., theft) that leads to further violent aggression.

The region named 'Forensic Awareness/Sex Assault' (KR-20 = .65) contains six variables. These are: the body was hidden (16%), the victim was strangled (12%), a sexual assault took place (10%), the victim was bound (9%), the crime-scene was cleaned (9%), and genital injury (7%). The grouping of these variables suggests two themes: (1) forensic awareness, where the offender acted in ways to avoid detection (e.g., cleaning the crime-scene); and (2) a sexual element to the crime.

Figure 1 shows that the top part of the plot is more related to offender-victim conflict when the murder or attempted murder occurred, while the bottom part of the plot is more related to the commission of another crime (e.g., a sexual assault or theft). Thus, the top part of the plot could be considered expressive crime-scene actions, while the bottom part could be viewed as instrumental crime-scene actions.

With regard to the specificity of the thematic split in the SSA plot, the themes explain 79% of the crime-scene actions. A clear divide can be observed between the 'Social Conflict' region (38.5%) and the 'Criminal Act' region (38.5%), while only one case could be classified as 'Forensic Awareness/Sex Assault'. Of the cases in this sample, 14% could not be assigned to a specific theme, while 7% could be assigned to two themes ('Social Conflict' and 'Criminal Act').

Finally, when relating crime-scene behaviors to offender-victim relationship and offender characteristics, the Fisher's exact test results showed one significant relationship, namely, female victims were associated with the 'Criminal Act' thematic region of the SSA plot (p = .002). However, a trend was noticed concerning gang members being related to the 'Social Conflict' thematic region (p = .055).

Discussion

This is the first study to examine the thematic interpretation of crime-scene actions in juvenile homicide cases using Belgian data. The results indicate thematic differences in terms of crime-scene actions involving social conflict, overtly criminal acts, and forensic awareness or sexual assault. Additionally, the expressive-instrumental dichotomy found in other homicide studies (e.g., Salfati & Dupont, 2006; Salfati & Haratsis, 2001; Salfati & Park, 2007) is shown to be useful when considering juvenile homicide.

The relationship between crime-scene actions and the offenders' background characteristics has been established in other homicide studies, and has been found useful as an investigative tool for the police (Salfati & Park, 2007). However, in the current study, the only significant relationship was that between the victim being female and the 'Criminal Act' region of the SSA plot. This finding can be compared to Salfati and Park's (2007) results, which showed that

offenders who demonstrated 'unplanned-instrumental' actions tended to target female victims. This might be explained by the high number of offenders who plan a crime (e.g., theft), but do not expect to find a victim at the scene or a victim who tries to resist. Female victims may be an easier target when committing crime-related homicide due to their physical strength. The current study also highlighted a trend where gang members were related to the 'Social Conflict' thematic region of the SSA plot. This can possibly be explained by the social interactions that occur during gang-related incidents.

By investigating the relationships between the thematic regions of the SSA plot and the offenders' characteristics, a decision-support system can be developed that could assist in refining the type of homicide that has taken place and the most likely type of offender involved (Salfati & Canter, 1999). As Salfati and Canter (1999) found, the identification of pertinent offender characteristics may contribute to refining and prioritizing suspect selection, leading to a faster process of identifying and convicting the offender.

The lack of significant relationships found in the current study could be explained by the heterogeneous nature of the sample. Similar to Santilla et al. (2003), who used all the legally defined homicides in Finland during a particular period of time, the practical usefulness of their findings was limited. As such, they recommended that future studies should separately analyze homicides where the offender was not immediately arrested or if the case was particularly difficult to solve. Additionally, previous homicide studies focused on adult offenders (e.g., Salfati & Canter, 1999; Santilla et al., 2003). It is possible that young offenders have a less extensive or varied history of offenses when they are arrested for homicide.

A limitation encountered during this research was the absence of a central database that stores information regarding all homicides occurring in Belgium. It is thus difficult to give an estimate regarding the representativeness of the current sample, which was already limited in terms of its size. Additionally, only solved cases where the offender was convicted were used in the current study. This means that the study's findings cannot be generalized to all juvenile homicide offenders.

In terms of future research, as has been done in other homicide studies (e.g., Salfati, 2000; Salfati & Canter, 1999; Salfati & Haratsis, 2001; Salfati & Park, 2007), it would be interesting to explore the crime-scene actions of juvenile homicide offenders in other countries. In this way, similarities and differences can be compared across samples that are culturally different. The current study is part of a larger project on juvenile homicide, which is anticipated to lead on to further international research.

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The role of conflict and planning in crime scene staging: an analysis of solved homicide cases

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Introduction

Over the last 15 years, a small but growing body of research has examined crime scene staging in homicide cases (Douglas & Munn, 1992; Eke, 2001; Ferguson, 2014a; Ferguson 2014b; Ferguson & Petherick, 2014; Geberth, 2010; Hazelwood & Napier, 2004; Keppel & Weis, 2004; Meloy, 2002; Pettler, 2011; Schlesinger, Gardenier, Jarvis & Sheehan-Cook, 2012; Turvey, 2000). The research has examined many elements of staged offences, including victim and offender characteristics (including mental health), common crime scene behaviors, incident characteristics, how offenders react to police suspicion, and the use of forensic evidence in investigating crime scene staging (Eke, 2001; Ferguson, 2014a; Ferguson & Petherick, 2014; Meloy, 2002; Pettler, 2011; Schlesinger, Gardenier, Jarvis & Sheehan-Cook, 2012; Turvey, 2000). As a consequence of these efforts, there is now some consensus regarding the usual elements present in these complex cases (Pettler, 2015a). We now know there is often a relationship between victim and offender in staged homicides, although it is not always an intimate one (Douglas & Munn, 1992; Ferguson, 2014a; Pettler, 2015; Turvey, 2000). The most common types of crime scene staging are verbal staging, staged burglaries, and staged suicides (Ferguson, 2014a; Pettler, 2015a, 2015b; Schlesinger, Gardenier, Jarvis & Sheehan-Cook, 2012). Most offenders' evidence manipulation efforts are very basic, although some cases do involve substantial time and energy being spent staging the scene. Few offenders carry out additional efforts to manipulate evidence aside from the three basic ones, which include: moving weapons at or away from the scene, repositioning bodies, and lying to police (Ferguson, 2014a; Schlesinger, Gardenier, Jarvis & Sheehan-Cook, 2012). About an equal number of offenders confess versus deny their involvement to police, although many, if not most, lie for some period of time before they eventually confess (Ferguson, 2014a; Pettler, 2015; Schlesinger, Gardenier, Jarvis & Sheehan-Cook, 2012).

In spite of a modest amount of consensus existing around the way these scenes commonly present and the problems arising in their investigation, much remains unknown about some important aspects of staged homicides. A number of scholars have recently called for more detailed analyses into whether these crimes are simply a subtype of more widely studied domestic violence homicides, or if they are a different set of behaviors, with discreet motives, triggers and offender characteristics (Ferguson, 2014a; Pettler, 2011, 2015). More needs to be known about the specifics of relationships (domestic or otherwise) leading to homicides and crime scene staging, to assist law enforcement with investigating these complex cases. Specifically, it is necessary to gather more information on the extent to which normal interpersonal conflict precedes these deaths, whether they are couched within episodes of domestic violence, or whether they are calculated murders planned in advance (or perhaps all of the above). It is also necessary to gain additional knowledge on offender behavior after the

death, including the interactions these offenders have with police. The current study is an effort to begin to fill this significant gap. In particular, we focus on the following research questions.

Research Questions A – Relationships

What types of victim-offender relationships are present in these cases? Do these relationships have a history of violence and in what context does the violence occur (domestic, alcohol-related, etc.)? Do homicides involving staging happen during normal interpersonal conflicts or are they planned in advance?

Typically, staged homicides are thought to involve victims and perpetrators who are known to each other, often in intimate relationships (Pettler, 2015). It is unknown whether these relationships involve previous violence, although the presence of domestic abuse may be assumed by some (United States Department of Justice, 2011). Empirically testing and explaining this assumption is an important addition to the literature, potentially useful for investigative strategy and narrowing suspect pools.

Research Questions B – Post-Offense Behavior

In their statements to police (including 911 calls), do homicide stagers attempt to draw attention to particular staged elements? Do they attempt to assist law enforcement above and beyond giving a statement (through repeated contact for example)? Do police report them acting 'suspiciously' after the death? Do they conduct research before or during investigations to assist their staging efforts?

Many examples exist of offenders acting suspiciously when giving statements to police, and often this behavior leads to initial thoughts that they may be involved in the homicide. We plan to quantify and measure offender post-offense behavior, by examining these 4 important elements. It is hoped that the presence or absence of these behaviors across cases may assist with identifying investigative red flags for detectives to be aware of.

As is clear from the research questions outlined above, many of the variables we seek to measure are inherently difficult to define and quantify. Indeed, concepts like 'suspicious behavior', 'conflict', 'planning', and even domestic violence have been notoriously tricky for researchers to reliably measure. Through presenting our research proposal to the HRWG, we are hoping the wealth of expertise available can assist us in determining how best to tap into these variables to gain maximum benefit from our study. Specifically we hope the research experience of the HRWG will help with adequately operationalizing these variables so that reliable results can be disseminated back to homicide detectives and researchers.

Methodology

Data will be gathered through snowball sampling via the authors' relationships with law enforcement agencies. Our sample will consist of full case files (briefs) involving homicides occurring between 1995 and 2015, which were staged to appear as something else. These cases need to have been adjudicated and led to a conviction. Cases with convictions for varying degrees of murder will be included in the sample, as will manslaughter cases so long as the other selection criteria are met. Our expected sample size is 100. We will use a definition of

crime scene staging synthesized from others in the literature, which defines the behavior as the deliberate alteration of physical evidence at an alleged crime scene in an effort to simulate events that did not occur, that is intended to mislead authorities or redirect an investigation (Chisum & Turvey, 2007; Ferguson, 2014b; Geberth, 2006). Hazelwood and Napier (2004) add there is also verbal staging, where the offender makes self-initiated contact with police to report a homicide victim as a missing person in an effort to avoid investigative scrutiny. Cases involving verbal staging, with physical evidence manipulation in an attempt to redirect the investigation will also be included.

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Motor Vehicle Theft Following Homicide: Analysis of Motivational Undercurrents

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Abstract

The incidence of theft of a victim's vehicle following a homicide is important not only to finding the vehicle - a crucial element of the investigative process - but also the understanding of homicidal motivation. Drawing on open-source data and results from the National GLBT Homicide Database, we propose that motivations for stealing the victim's motor vehicle(s) following a homicide include: escape, financial, and psycho-sexually oriented motivators. The frequency of these motivators, and the contextual factors associated with each sub-grouping are discussed. Due to the constraints of open-source data use, further research is advised with more rigorous analysis and greater comprehensive sampling.

Introduction

A common feature of LGBT homicide is the theft of the victim's motor vehicle by the offender. Motor vehicle theft following a homicide is not exclusive to LGBT homicide. Beyond this distinction, however, little is known about these incidents. Events both leading up to, and following the murderous assault often provide critical insight into the motivation behind a crime. We propose that the theft of the victim's motor vehicle is related to the homicide and can be predictive of other factors.

This paper investigates the circumstances surrounding instances of motor vehicle theft following homicide. In the National Database on GLBT Homicide, the reported incidence of motor vehicle theft following homicide is up to 36% (Drake, 2014). The base rate of this, and the reason behind such a common co-occurrence is unknown. Ultimately, the understanding of these cases must be conceptually grounded. Literature on criminal career courses suggests that offenders often specialize in one particular crime or type of crimes (Guerette, Stenius & McGloin, 2004). In this phenomenon, the contemporaneous occurrence of two subdivisions of crime (violent and property crime) provides a unique opportunity to assess the crossover of criminal specialization.

While we will undoubtedly cast light on a presently under-discussed aspect of homicide, our results will be descriptive in nature and limited by the availability and reliability of open-source data. For the purposes of this study, we have constructed an independent database of cases of motor vehicle theft following homicide. This report will then provide an empirical lens by which to view this phenomenon, identifying motivational factors, and laying the groundwork for future discussion of the topic.

Literature Review

Commonalities in motor vehicle thefts have led to identification of a structural framework of steps comprising the criminal process. This protocol spans from the decision to steal the vehicle, to arrest avoidance techniques (Cherbonneau & Copes, 2005). Beauregard, Rossmo, and Proulx (2007) also use the rational choice model in this way to address serial sex offenses.

Regarding post-crime flight, Ressler, Douglas, Burgess, and Burgess (1988) discusses differentiating between immediate and delayed responses of an offender. They state that the immediate flight response may be due to "a conscious attempt to avoid apprehension, in response to a lack of a plan of action, or... to continue the excitement generated by the murder." (Ressler et al., 1988, p. 62) This is then contrasted with a more lucid and logical delayed response following the murder.

Turning to specific characteristics of the motor vehicle theft following homicides can provide clues about an offender's preferences and their plausible motives. Two general structures of motor vehicle thefts include: temporary and permanent (Roberts & Block, 2012). These two sub-groups are separated only by the intended use of the vehicle and the length of time that an offender keeps the vehicle - each having unique characteristics related to the offenders.

Generally, temporary auto vehicle theft is committed for “non-profit personal needs, including joyriding and short-term transportation” (Roberts & Block, 2012, p. 446). Short-term transportation might be used for fleeing the scene or transporting the body. Researchers have been consistent in their use of explanatory factors for all types of motor vehicle thefts, regardless of associated crime. When considering recovery patterns of stolen motor vehicles, Copes (2003) found that the majority of vehicles recovered are found within the first three days.

An offender’s underlying motives for Motor vehicle theft are frequently described as “recreation, transportation, and for profit” (Adger, 2007, p. 11). These motives differ from dramatically from the conventional attributions of altercation-based homicide. Given this seemingly clashing theoretical structure, it is important to note that underlying psychological characteristics may operate together in these cases.

Substantial research supports the incidence of offender specialization, even after lengths of incarceration and the resulting post-release recidivistic crime surge (Guerette et al., 2004; Miethe & McCorkle, 2001). Accordingly, we made note of patterns that emerged in our dataset related to the specialization vs. versatility of criminal behavior. Our study was vigilant of observed prior specialization crossover between property and violent crime. Literature in psychology has long supported the connection between high-anxiety situations and sexual arousal (Barlow, Sakheim, & Beck, 1983). Schlesinger & Revitch (1997) also suggest a number of both overt and covert sex-related drives as criminogenic. Many paraphilias have

similar literature suggesting the sexual link (Money, 1986; Browne, Williams, & Dutton, 1999; Geberth, 1996; Ressler et al., 1988).

The line of reasoning suggests the following propositions:
Hypothesis 1. Motor vehicle theft following homicide differs from the two component crimes.
Hypothesis 2. Vehicles will be missing for a longer period than three days on average.
Hypothesis 3. Offenders have a criminal history of either violent or property crime.
Hypothesis 4. Sex-related components will be present frequently, even in non-LGBT cases.

Methodology

We selected cases from local and national news reports on motor vehicle theft following homicides. For an in-depth review of the open-source data collection method and limitations utilized in the present study, see Buck, Yurvati, & Drake, 2013. Starting with specific years, specific search terms and phrases were used to collect cases. Specific criteria were used when selecting cases, culminating in the Cases of Autos Stolen post-Homicide (CASH) Database. Following the collection of this information, we compared it with extracted data from the National Database on GLBT Homicide. Simple statistical analyses and frequencies were then run within Microsoft Excel and SPSS.

Findings

Cases extracted from the GLBT database amounted to 200 incidents in which the victim's vehicle was stolen following the homicide. Initial inclusion required that an element of the homicide (victim, offender, or scenario) be classified as "gay, lesbian, bisexual, or transsexual". As this database was previously constructed, a number of variables appeared in different forms or with different attributes to the newly constructed set.

Cases in the GLBT set involving single offenders comprised 69%, whereas offending dyads accounted for 23.5% of cases. Single offenders were overwhelmingly male at 99.3%. In offending dyads, the percentage fell to 84.0% male. Offenders ranged in age from 15-56 years of age. The average offender age was 25.5 years and the median age was 23.

Victims were identified as male in 84% of the cases, and female in 15.5%. Victim ages ranged from 9-82 years old with an average of 46.9 and a median age of 47. The most frequently victimized age was 39 years old. Female victims tended to be younger than their male counterparts. Male victims had an average age of 48.1 years and a median of 48 years.

The Cases of Autos Stolen post-Homicide (CASH) Database is made up of 98 meeting the initial inclusion criteria. Nearly half of the offenders were mentioned as having a criminal history (49.3%, 68/138). Male offenders comprised 92.6% of those with a discussed history. In solo offenders, 68.4% were reported as having a criminal history. In offending groups, offenders were less likely to have a criminal history. Criminal history was split among the following: violent, property, or other. Of those with a criminal history, over half had a history of violent crime (55.9%, 38/68). All but one with a history of violent crime were male (37/38).

Offenders with a history of property crime comprised 47.1% of those noted to have a criminal history. Women were much less likely to have a discussed criminal history at all.

Identifying information on the type of vehicle stolen was available in nearly all cases (99.0%). Of the vehicles stolen, most were cars (71.7%, 71/99). Furthermore, vehicle discovery location was available in 78 of the 98 cases. In half of cases, the vehicles were discovered on the street (50%, 39/78). Alternatively, they were found in parking lots 38.5% of the time.

The elapsed time between vehicle theft and discovery was available in most cases. In a majority of cases, the vehicle was found within the first 48 hours (60.2%). Across all cases, the median recovery time was 2 days. Offenders fled the area comprised 20% of the database.

Multiple offender scenarios made up 41.2% of the cases. Offending pairs constituted the overwhelming majority of these (70%). There are substantial differences between the single offender scenarios and multiple offender scenarios. Offending groups included more females, with 22.5% of offenders being women vs. 13% of single offenders. Additionally, offenders that operated in groups tended to be substantially younger than their counterparts.

We evaluated the cases for sex-relatedness and inter-group power dynamics to assess potential motives. To classify a case as sex-related, it must have met the conditions for at least one of fifteen documented syndromes. Syndromes of sex-relatedness ranged from overt to covert. Of cases with identifiable circumstances, up to 82% of cases included an element of sex-relatedness.

Victims of homicide with confirmed sex-relatedness elements were more often female than male by a small margin. These were most often perpetrated by single offenders. Two-offender cases were also often sex-related (77.7%).

The most frequent inclusion syndromes were "overkill" and "strangulation". Cases involving an element of overkill accounted for up to 41.1% of all cases. Strangulation of the victim occurred in 16.8% of all cases. In cases of strangulation, over half cases involved "domestic" relationships, such as housemates or intimate partners. Cases of strangulation were overwhelmingly performed by single offenders (81.3%). There also appeared to be a correlation between criminal history and sex-relatedness.

Discussion

Our findings support the hypothesis that motor vehicle theft following homicide differs substantially from the typical image of homicide. Various elements of these crimes individually, while present in some cases, did not occur at the anticipated rates. Furthermore, the offender profile deviated significantly from what would be anticipated for either of these crimes.

Contrary to the hypothesis that vehicle discovery would take longer in these cases, the median recovery time was very short at two days. This may have been due to urgency of the

offenders. Offenders seeking to avoid apprehension would rationally dispose of the vehicle to avoid the heightened risk and public vigilance caused by the presumed association with the homicide. The hypothesis that sex as a component of CASH was supported in that up to 82% involved a sex-related component.

An offender profile emerges from this single and unique post-crime offense. One might expect, with an evolutionary perspective that one begins their criminal career with property crime and evolves to become a perpetrator of violent personal crime. There is no clear evidence that such a progression exists. The data suggest a more integrative offense pattern.

As offender count increases within co-offending groups, diverse offense history decreases, suggesting that this event may be the initiation to such a crossover. Given the absence of diverse criminal history and relative infrequency of other types in our female offender population, this supports a subordinate role of many female offenders in group criminal scenarios.

It appears that these incidents are structured, at least in part, by what we generally understand as power dynamics. The increased frequency of female offenders in multiple offender cases suggests in-group intimacy building through the violent act. This scenario has been explained in the literature as a paraphilia named hybristophilia--or the Bonnie and Clyde syndrome (Vitello, 2006). As one might suspect, co-offending groups were composed of a much younger population than individual offenders.

Cases presented a variety of both overt and covert forms of sex-relatedness. Cases that were not judged as being explicitly sex-related through our criteria may actually have been sex-related covert indicators. Examples include factors strongly correlated with sex including crime-scene evidence such as injury patterns and victim disposition. It is important to note that auto-theft, as with sexual relatedness, may be related to low impulse control, however, auto-theft appeared to have been planned in at least four cases.

While stealing the motor vehicle may seem like the only logical option, departing a crime scene can occur in many ways. The offender has many viable options for a getaway including but not limited to their own vehicle, a bicycle, walking, or the use of public transportation. Theft of the victim's vehicle is an extra and a seemingly unnecessary and problematic element.

A motor vehicle is likely one of the most expensive items that they will ever own, second only to a house. A vehicle is also a visible indicator of superior social and economic capital. Understandably, this makes vehicles an prized trophy for offenders.

Offenders who kept the vehicle longer than two days would have been exceptional. In the present study, some cases fall well outside of this range, further supporting a link with thrill-seeking behavior. Keeping a vehicle longer further may serve to extend the thrill and excitement.

One unique and perhaps unexpected source of information on CASH is found in the National LGBT Homicide Database. The LGBT cases contain a higher rate of male victims, male offenders, and solo offenders. Few women are involved as offenders, which helps underscore the same-sex dynamics and sexual nature of this type of offense.

Victim characteristics in LGBT cases include a substantially older median age. This was even the case in the rare instances of female victimization. Also, the ages of victims in the LGBT cases were distributed much more evenly than in their CASH counterpart. This makes sense because the older a victim, the more wealth accumulated, and the more valuable the potential trophy. Because the vehicle theft may originally be an impulsive act, the car is not always taken. A trophy must be worth putting on display. In each of our datasets, examples of brazen displaying of the vehicle exists.

Group offending in LGBT cases was less common than in CASH incidents. However, the pattern of sex-related elements appeared to be similar in both datasets. This downplays the possibility that CASH is part of any anti-LGBT pattern of hate-crime.

Vehicles in this study were recovered at a much higher rate than for a typical auto theft. Extraordinarily, the rate for motor vehicle recovery following homicide occurs 84.7% of the time. While this may reflect a higher priority of recovery for vehicles taken from death scenes over that of lesser crimes, it may also reflect a profound difference in the disposal procedure.

Conclusion

These findings also point toward a high rate of sex-relatedness in heterosexual homicides where motor vehicles were afterward stolen. Ultimately, further investigation with a more rigorous experimental design should be pursued to establish a causal link along with increasingly robust evidence. As with the growing body of translational literature, the hope of this study is to assist in the investigation and resolution of such crime and further the capabilities of researchers and practitioners alike.

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Panel Session 6: ***Analyzing Homicide Crime Scenes and Behaviors***
Recorder Notes: Lauren Wright

Questions re: Exploration of Crime-Scene Actions in Juvenile Homicide in the French-Speaking Part of Belgium

Becky Block: It's really nice that you've done this. Creating new data sets has been kind of a theme and it goes to my heart. It's a theme. There have been lots of people that have done that at this meeting and it's very, very cool. I just have a couple questions, one just for information purposes. Legally, you took the age as 21 as the maximum age, what's the minimum age legally to be charged with homicide?

Jean: Normally it's 18, but in Belgium you have this, like, window between 16 and 18 years old, where when it's a homicide usually, the judge will decide that the youth can be sentenced in the adult court, that he would be transferred and judged for that.

Becky Block: Okay. So, that's important to tell people. In the Chicago homicide data set, we have a 7 year old, and you're going be the legal definition of being charged, and not..you know, we just have different things. For practical use, I think it might be helpful, based on the crime scene, to get some idea of the offender's age.

Jean: Do you mean to include that as a variable?

Becky Block: Well, um, I mean, what is the difference between crime scenes with the juveniles as you define them and other crime scenes in Belgium? Is that possible for you to comment on or maybe would that be another study to do?

Jean: So, you mean that compare a juvenile who has committed homicide compared to a juvenile who has committed robbery or things like that?

Becky Block: No, that's not quite…I was thinking of looking at homicide crime scenes. And looking at the difference between, and you've just pulled out the juveniles, and you know, looking at the difference between characteristics of those crime scenes and the characteristics of the average adult crime scene. I think that study would be useful. Do you have… no one has done a Belgian study of crime scenes in general?

Jean: They might have been…yes, so they've used…I think I remember seeing the last year…I can't remember exactly, but, yes. Although I don't know how you would compare…that's something to think about I guess.

Becky Block: I'm thinking, for example, the gang…and maybe being gang related for juveniles being something different than gang related …maybe it's more likely for adults to be an organized crime syndicate sort of thing versus a more expressive…you get revenge against a neighboring gang.

Jean: Thank you.

Jesse Holton: I'm looking at your figure one and I was kinda interested in how close the clusters are for the forensic awareness sexual assault. Is there a plan to put in an intimate partner violence variable?

Jean: Well, the thing with juveniles, not that many of them had someone in their lives. So, this would be a really tiny percent, so I wouldn't have put that in. With adults, yes, but not with juveniles.

Jesse Holton: So, you're saying that you don't think there was some type of intimate partner relationship with these juveniles that are making these types of sexual strangulation and crime against a victim?

Jean: In that sample…

Jesse Holton: It just seems to me, that to leave some part of a relationship that is intimate partner defined…involved with that cluster.

Jean: There were quite a few on stranger and maybe one there was at some point, a girlfriend, but wasn't at the time of the crime. With this, for example, I wouldn't have had any…question about it.

Unidentified Questioner: This may be a really stupid question, but what is the practical use of this? Tell us. What does it either tell homicide investigators who are trying to solve the cases, I realize these are all solved cases, but what does it either tell investigators or for us as researchers that we didn't know before?

Jean: Because there haven't been any studies on juvenile homicide in Belgium, that tells you how the crime scene looks for juvenile homicide in Belgium so that you have, like, three themes. I did hope to find some relationship between the variety of offender background characteristics from the crime scene so that would help narrow down the field of suspects. But, at this point, as we found out, it doesn't always work.

Amber: Mine is more towards Becky. So, the very first presentation I gave here at HRWG was (incoherent). So, if you're interested, I can probably dig that up for you. It was never published, it was part of something for a class that never got turned into a paper. So, it would be the U.S. not Belgium.

Jean: I have a sample from the Czech Republic and this is something that I'm doing at the moment, where the Belgian data I didn't have an adult data set to complete it with, but that's another thing that is useful and what I am going to pursue. But I would use those type of analysis because that's useful for some of the characteristics.

Kathleen: That's very interesting work. I've got two questions. And you're building nicely on Salfati's work. Do you think it would make a difference and they're related. Cornell has a typology and it's maybe a little simpler. If juveniles were involved in a crime they'd be in one category, and if they were involved in some conflict-related argument, drunken brawl, um, you also had a psychotic one, but they might fall into one category. Do you think, as you know your data, of your 57 cases, what do you think would've happened in simply putting them in crime related versus conflict related scenes or do you see any value in that?

Jean: Yeah, I do see the value, but on this one, I wanted to look at the crime scene characteristics and also in the Cornell Typology, he also looks at the offender characteristics and the crime characteristics. That is why, it is something that I have to…in my thesis. It was one of the…

Kathleen: It would just be interesting to see if the other typology would be more relevant. And this is just related…since you have a sample of 57, which is decent, we'd love to have thousands or hundreds, but we don't. What's your next step?

Jean: I'm trying to publish my thesis in different studies. But my next step is to work with serious crime analysis because I want to see if we can tell from the crime scene if it was committed by a juvenile or adult.

Jeff: The SSA looks at the variables at the verbal level. Do you plan to follow up with the NSA to look at the offender level to see if any type of evidence emerges?

Jean: No, I didn't. I used the (incoherent) to make my…and some of them were a bit lower and some of them were a bit higher compared to other studies. So, it didn't seem to be quite coherent.

Becky: Obviously, a limitation with all these studies, is that they depend upon solved cases. The limitation is that solved cases could be very, very different from unsolved cases. It's usually much easier to solve domestics, it's easier to solve expressive homicides in general. I'd like you to comment on that as a limitation and how you think it might have affected these results. As a part of that, women, there weren't very many young women. I just have an informational question, what's the law in Belgium about infanticide? Does that exist as homicide?

Jean: Yes, there were a few cases of that in the data. In Belgium, you have neonaticide, which would be the first 24 hours of the birth, and infanticide being in the first year of the child's life. As you said, there were not that many cases, so it's difficult to generalize. So, I would just say what my data shows and what for future studies is needed.

Questions re: The Role of Conflict Planning in Crime Scene Staging:
An Analysis of Solved Homicide Cases

Vance: This doesn't speak to the question you have, but, if you want to be an expert on this, I would think that it may not be a category, but something you should think about is law enforcement's involved staged crime scenes. To give you some examples: Lieutenant Becker in New York had some people kill a gambler. And the uniformed police were supposed to stay out of the way, which they did. So four men shot down this gambler on the street, got in a car and left. A citizen wrote down the license plate and gave it to a police officer. The police officer forgot it…he was told to forget it. The citizen then went to a journalist and gave it…and that's how all this stuff came about. So, in one way, they sort of limited what was available at the crime scene. Another example: Los Angeles Police Department used a bomb to kill a journalist and in killing the journalist they were also hoping to get rid of some of his notes. So, they in effect, were trying to kill a little with the crime scene. My third example would be in the area of drugs and homicides. Let's say Rebecca Block is a good, community-type drug dealer and she has every month contributed to my retirement in cash form, and I always want to help. So they're doing an investigation on Rebecca and they go to the house and there's drugs and all these sorts of things. One thing I will try to do is to make sure the chain of evidence is wrecked up in some way. It will never trace back to me, but I am going to do that. Now, she can't plead out, she can't do other things. But her attorney is going to know, at some point, to pull that card and she's not going to go to prison. On the other hand, alright, let's say Paul Blackman is not, and he wants to be his own entrepreneur and we go in and Paul's always going to have a misdemeanor amount of drugs. This gets to be a bother since he's not very cooperative to begin with, so I reach into my own stash and add enough to his, and it's a felony now. Of course I let an honest officer discover this, so in a way, I enhanced both crime scenes. So, I would think at least, that might be something to be aware of.

Claire: In a previous study I had measured law enforcement involvement. Turby did a study in 2002 about staging, but his sample size was only 25 and he thought that 25% of the cases involved law enforcement, so I didn't measure that because it's just dichotomous: is the offender involved in law enforcement either currently or previously and I think out of 141 cases, there were only like 5. It's something to think about, definitely, but I don't know that there's as much evidence to support that notion as perhaps people think. But, it could also be that maybe when law enforcement do stage crime scenes, they're really good at it.

Vance: We had a double murder and find that it was staged and we finally talked to the people who did it and they told us the exact police officer and how they did what they did. So, at least it is out there.

Claire: I get asked a lot by students and people that I present to at work and in training, stuff like that. How would you do this if you were going to do it? And it always scares me a little bit and I write their name down. Because, you know, potentially, not just crime scene staging involving law enforcement, but in my Masters level classes I teach at the university, there's a guy there who is one of the most prolific bank robbers in Australian history, and he's on parole and he's doing a Masters in Forensic Criminology. So there is an element, of, they can learn.

Becky: I have maybe a suggestion. You're looking for a large number of cases, so I don't know how much time and energy you'd have to spend on each individual case, but one way to look for domestic violence history is to look for proxy interviews. So that you would try to find people who knew the couple, and sisters or brothers, or a next door neighbor, something like that. Maybe as many as three per couple. And then you would use some standard form like the danger system. And you could get an example of their DV history that way.

Jessie: From the practitioner perspective, I'll actually try and help you answer the questions. As far as looking at staged scenes, most of the time it is post-death. And those are the suicides where the family tries to make it not look like a suicide or a drug overdose that they try and make it look like an accident or you have the accidental shooting or the discharge of a firearm, maybe they'll try and not make it look like it's negligent. Those are very sloppy cases. So, I would start with variables that are going to be those that police are actually able to prove that the death occurred before the staging. The pre-staged homicides, there is always a significant motive that is highlighted during the initial part of the investigation. With domestic violence, it's usually a mistress or another relationship that's been hidden and that's what red-flags the ability to go back and look at the crime-scene. So, as far as finding variables, I would definitely try and go for the post-mortem and pre-mortem - as far as being able to look at cases, it's not that difficult to make an (inaudible) with practitioners. I can give you some of our areas where we've had cases with staged crime scenes. And be able to let you actually get the crime scene practitioners' perspective on what they saw and then the investigators perspective on how he investigated that area and the medical examiners perspective on how he determined the manner of cause of death.

Claire: Would I need the form of a brief or something?

Jessie: It's a narrative. It is all one big narrative. That's what we do for coding our data. That way you don't have to rely on someone else making a database for you. You can actually create your own database, go in and code it inside, and then all the confidentiality aspects are removed and you can just walk away with your dataset.

Claire: But you have to actually be at the agency

Jessie: Yes. You do have to, but if you have interns or you know a local agency, like UCF, who can take the database that you create and send an intern to my agency, we can get you a dataset on how many homicides are pre-staged, if you want.

Claire: Okay. The post-death staging with the examples that you gave…they wouldn't fit within our definition. Because if it's the family trying to make it look like not a suicide or not negligent, whatever. We're looking for offenders committing murder and then staging…

Jessie: Those are pretty rare. When you actually have someone who plans to commit a homicide then stages the whole crime scene.

Claire: It doesn't have to be planned, it just has to be the offender is doing the staging. So, it can't be an accidental death or a suicide that's then staged to look like something else. It has to be a homicide that's staged…
Jessie: What I was saying in that, is that a lot of the staged crime scenes we get are suicides that the family is trying to cover up. The other ones are a lot of negligent discharging of firearms and domestic violence. The domestic violence, where the homicide wasn't planned but it ended up resulting in a homicide, and then you try and stage the crime scene to make it look like something else. Those are common as far as staging. The other one is the negligent use of a firearm, where a kid or family discharges the firearm and it hits somebody else and they try and stage it like a suicide. Those we can get you to look at, too. But, I would say the most common one that we see, because we have so many suicides, is when the family tries to make it look like a gun cleaning accident, or an overdose that really wasn't an overdose. Especially with autoerotic asphyxiation. A lot of times, that's an accidental death, and the family will come in and cover it up, just for keeping the family the pain of being embarrassed. Those I know you don't want to look at, but those are the most common when it comes to actually staging a crime scene. But, what we've seen as far as the pre-planned, where you get the guy that plans to kill his wife because he wants to leave with his mistress and get the life insurance, those are pretty rare and I think maybe I can remember 2 in the last 10 years that we've worked, but, we can also collaborate with other agencies to see what cases we can get and get those narratives for you so that you can create some kind of database and code.

Chris: Jessie, you raise an interesting point. You've decided that you don't want to look at cases where the family tries to cover up a suicide. But, do you know if there's a difference between those kinds of cases and a murderer that wants to cover up the fact that he just killed his wife for insurance?

Claire: I know that it's a different motivation. Avoiding embarrassment or…

Chris: But in terms of understanding staging…

Claire: The behaviors you mean. You're right, I've never compared the two types…

Chris: Well, it just strikes me. I mean, I completely bought that you were making this distinction in your inquiry to just one type, and then just sifting all the others out. But, the more you talk about it, the more I wonder if that's really helpful since you're looking at such a small sample. At the very least, in the beginning, maybe the issue would be to compare the two. To see if there's a difference.

Claire: I would guess from a law enforcement perspective, if the behaviors are different, and you go to the scene and you don't know what happened, then potentially you want to know how to differentiate between a staging to cover up an accidental death and a staging to cover up a homicide.

Jessie: A lot of the stuff that we've learned about staged crime scenes, comes from those suicides, where we know that the ballistics that should be what we see on the crime scene, aren't consistent

with what we're seeing when we're on the crime scene. And that happens a lot. Especially in Florida we get a lot of elderly suicides, especially with medical. If somebody's got medical problems, they'll kill themselves. What we've seen, a spouse will cover up, for a dignity issue. Being able to analyze those crime scenes and understand both the impossibility of the ballistics that we see based off the changing of the crime scene...we use those when we go to the negligent crime scene to get suspects to confess to rearranging the evidence. So, I would think that the suicides that are manipulated have very good characteristics for helping us understand the full aspect of altering a crime scene.

Claire: In my work previously, I've…I don't know why I made this decision, to compare staged suicides, or a homicides staged to look like a suicide, vs a real suicide or a staged burglary against a real burglary, but I supposed I could look at two types of staging and compare those instead.

Jessie: And it will support your data, especially when you look at gun placement. Because I can tell you that in all the places I've worked, in real suicides, the gun was never in the hand of the suspect. Or, what you find, in every single case. If that person did shoot themselves, the gun is not in their hand. Anytime you walk into a crime scene and the gun is in the person's hand, it is 100% staged and we start looking for other things. That's a significant variable that we get from suicides that we use in the other staged crime scenes and I think that would be very relevant to your study.

Questions re: Motor Vehicle Theft Following Homicide: An Analysis of Motivational Undercurrents

Vance: I guess I'll sort of direct this at one of the other authors, Dallas S. Drake, is he here? This doesn't actually deal specifically with the research you're doing, but I have in my possession, a recording of an interrogation of a man who killed his gay lover and stole a vehicle and it's at this point we don't have a full confession, but we do get an admission out of him….so if that in some way would help, I can probably send you a copy of it, and it's a very, I think, effective interview and shows how maybe to get…to be helpful to police to get information. So, think it over.

Adam: I guess I have a little bit of a question. So, you talk about the connection between the property crimes and the homicide as, you know, motor vehicle theft alone, homicide alone, and a combination of the two. And, I don't have experience with a lot of cases, but I've looked at some case files and some of the examples of the cases that I've seen that involve homicide and motor vehicle theft…it sorta fits with the kind of data you're finding. Multiple offenders, more female offenders than you probably expected. There was a case that I looked at that was, two women had gone to a neighbor that they knew had money and they sort of seduced him and they wound up having strangled him with a phone cord, they take all his credit cards and try to flee from Ohio to New Orleans. Or a case where somebody tries to, where the vehicle is really, just say, "I'm going to drive to Mexico, and try not to get caught. So, in that case, it was a combination of not two types, but three. Motor vehicle theft, was sort of incidental, it was a car that they had to burglarize someone so they wouldn't get caught. So, I'm wondering if it's simplistic to suggest that motor vehicle theft is part of the motivation to the homicide or if it's

just incidental to the effort to escape or cover up the homicide. Which would make it sort of a different profile then other motor vehicle theft cases. So, I wonder if there's maybe a statistic, maybe a detail, that would be necessary to find out if most of these cases that just…does that make sense?

Michael Becker: Yes, actually, one of the things that we did take a look at was, "how do people leave the crime scene?" We always assume that they have their own transportation to and their own transportation from, and I'm looking to find a whole lot on people who use bipedal locomotion, do people take bikes to pick their own vehicle up? Actually, that's something I'd like to learn a little bit more about before we can move forward with this. How do people choose to leave the crime scene? Is there any specific reason that they would take the victims vehicle over their own?

Dick: Maybe I'm having trouble getting ahold of what these might be…do you think that using traditional definitions like instrumental and expressive or the relationship of the victim and offender to get a better descriptor than just vehicle theft and murder. So, for example, relationship…are these people…this car that's stolen, are these people that know the offenders?

Michael: Regularly, yes.

Dick: Or, say, is it a nephew killing an uncle, so is it family related? They know the car and the victim? That maybe the killing…and the two coincide. I think you need to know more about their relationship in order to express it.

Michael: Actually, one variable we tracked, of course, was, we had about 80 variables to track. But the most frequent relationship that we did find were stranger, intimate partner homicide, there were quite a few roommates, people who shared the same living dwelling. It really ran the gamut. So, that's part of why we thought this might be interesting to look at least from a different angle, rather than exclusively intimate partner, or exclusively stranger homicide, or one vs the other, or other classifications.

Dick: I was thinking about why are cars stolen? One example, one reason maybe it is to get away. Also specifically, cars are stolen not to keep, but to chop, and I would think that those wouldn't occur frequently…

Michael: We actually found about two cases where there's evidence that the vehicle was disposed of for financial gain, so if the individual might have kept the car and changed the plates, or they made some effort to deceive law enforcement, it was factored in. Or they did try and sell it off. Some actually did that. One individual that I can think of actually brought the title to a used car dealer trying to sell it as his own and obviously that didn't work for him. But, you're correct, it's very rare that a case has financial motivation, specifically linked to reselling a vehicle.

Becky: There's…and obviously not the wonderful detail that you're looking at, but a lot of the…(inaudible) have a homicide dataset. So, I'm thinking that if you wanted to do a short analysis as part of the research you're doing…but we can talk about that later.

Michael: That would be wonderful, thank you. Actually, I forgot to mention this in the sampling, but from 32 states, by and large from Texas and North Carolina and Florida. So, we didn't actually have a whole lot from Chicago and that could be more of an artifact of who takes cars and the homicides in Chicago…

Panel Session 7: ***Theoretical and Measurement Issues in Studying Homicide***
Chair: Jeff Osborne – Recorder: Jolene Vincent

Overkill, We Know it When We See it: Quantifying Excessive Injury in Homicide

Kimberley Schanz, John Jay College of Criminal Justice
Carrie Trojan, Western Kentucky University
C. Gabrielle Salfati, John Jay College of Criminal Justice

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Introduction

The term 'overkill' has made frequent appearances in historical and contemporary studies of homicide, despite the lack of an agreed upon definition. The most common definition in use - "the infliction of more injury than is necessary to kill a person" (Ressler, Douglas, & Burgess, 1992, p. 55) - seems to be so widely accepted and commonplace in the homicide vernacular that numerous authors include the usage of the term without providing a clear (or any) definition (e.g., Keppel & Walter, 1999; Godwin, 2000; Kaplan, 2007).

Despite the lack of an agreed upon definition, a number of studies have utilized overkill as indicative of offender motivation (e.g., Keppel & Birnes, 1997), a characteristic of a particular type or sub-type of homicide (e.g., Bell & Vila, 1996; Hunter, Hazelwood, & Slesinger, 2000; Kaplan, 2007) or as suggestive of the nature of the victim-offender relationship (e.g., Last & Fritzon, 2005; Heller, Ehrlich, & Lester, 1983) - all of which imply that it is directly useful in homicide investigations. While excessive wounding or overkill may in fact be shown to be a useful tool in investigations, the utility of any crime scene variable is directly correlated with its objectivity, hence, the need for a clear definition.

A brief survey of the literature reveals several key issues in the apparent dispute in defining overkill, including: (1) whether the definition should account for the offender's subjective awareness that they are inflicting more injury than necessary to kill the victim, (2) what wounds should be counted in the decision that overkill is present or absent, and (3) whether a definition should account for the severity of wounds, focus on the overall quantity of wounds inflicted, or both. In terms of the final issue, it could be argued that overkill is a concept inappropriate for discrete boundaries and some leeway in subjective coder judgement should be allowed. However this presents a certain danger to the body of research as a whole. As discussed in depth by Trojan and Salfati (2008), when different studies utilize varying criteria to validate their findings, it allows a proposed model to seem more or less able to capture patterns in the data only because a less stringent criteria was used. In relation to

overkill, if overkill is hypothesized to indicate a type of offender, sub-type of homicide, or victim-offender relationship, then a researcher can easily confirm that hypothesis by using a less stringent definition of overkill making its identification more likely. Without careful consideration as to how the definition translates into the actual classification of a case, replicating the findings of studies becomes difficult and potentially lowers the empirical validity of the findings and their utility to investigators. The purpose of this study is to address this gap in the literature through a focus on conceptual issues that are inherent in different definitions of overkill that may introduce difficulties in coding and examining variations in inter-rater reliability across definitions.

Definitions of Overkill: From Vague to Specific

As stated previously, the most common definition of overkill is the infliction of wounds above and beyond those required to kill the victim (Ressler et al., 1992). Some variation of this definition has been used by a number of authors (e.g., Keppel & Birnes, 1997; Hunter et al., 2000; Keppel, Weis, Brown, & Welch, 2005). The central problem with this definition, discussed by Bell and Vila (1996), and reiterated by Trojan and Krull (2012), is that the ambiguity of the definition makes extreme cases easy to identify, while the less extreme cases introduce difficulties in reaching consensus on the presence or absence of overkill. As Bell and Vila (1996) state, as the number of wounds inflicted upon the victim decreases it becomes much more difficult to identify a cut-off point at which overkill becomes necessary to kill.

Other problems with this definition are also apparent. One issue is whether or not the definition implies a subjective awareness on the part of the offender that they are inflicting more wounds than necessary to cause death or an implied psychology and meaning relative to an offender's emotional state, including one of loss of control or one of anger. Additionally, there appears to be disagreement in the literature as to whether or not the focus should be on the quantity or quality of the wounds or if both can/should be accounted for. For instance, Douglas, Burgess, Burgess, and Ressler (1992, p. 130) define overkill as an "excessive amount or severity of wounds or injury". This suggests that one could have *either* a large number of wounds, of any level of severity, or a small number of wounds provided that they are 'severe', a term they do not define.

A handful of studies have put forward more specific definitions of overkill that may result in facilitated coding. Jordan et al. (2010, p. 187) provide a little more guidance in defining[13] overkill by stating that overkill is present in a case "if the victim sustained multiple injuries within one or more causes of death (i.e., multiple gunshot wounds) or if the multiple wounds of the same type were distributed over two or more body regions and considered causes of death in each". Significantly less subjective on its face, and thereby resolving some of the coding issues discussed elsewhere, conceptual issues are still present that merit consideration. First, the authors did not provide justification for why two or more body areas must be wounded within a single method of wounding, nor do they specify if all body regions are equal (e.g., wounds to the extremities versus the torso). Moreover, the authors use of the

[13] Jordan et al. (2010) adapted their definition of overkill from Salfati (2003).

term 'multiple' could indicate (technically at least) that we simply need more than one wound. Even if we use a slightly higher criteria of more than three, this could mean that shooting an individual four times in the chest would meet the criteria for overkill. It is quite possible that setting such a low threshold for overkill would lead some to suggest the intended meaning of overkill is lost. A very recent definition was provided by Tamsen, Logan, and Thiblin (2015; p. 94) which states that overkill is present if there are "a total of 40 or more skin injuries (blunt, sharp, gunshot) [or] 3 or more sharp wounds located at the head, neck, or trunk with internal organ injuries (including the pleura and large blood vessels) [or] three or more gunshot wounds located at the head, neck, or trunk with internal organ injuries (including the pleura and large blood vessels)". The authors clarify that the threshold of 40 was derived from a previous study that demonstrated a small cluster of cases exceeding this number existed in their sample and clearly demonstrates a determined degree of violence on the part of the offender. Thus, coding is simplified through a discrete drawing of boundaries accounting for the overall number of wounds, as well as allowing for fewer wounds that are of greater severity. However, the low number of wounds in the second and third part of the definition may be too low if offender intention is a requisite part of identifying overkill.

Collectively considering the variation in how overkill has been defined, the conceptual problems inherent across definitions, and the coding issues these difficulties present, usage of the term overkill in studies is problematic until a fully operationalized, precise, and easy to code definition with high inter-rater reliability is put forth that is either based on theory or will allow a valid measurement upon which one can be built. This study is the first step in that process.

Aims

The aim of this study is to identify both conceptual and logistical coding issues across three different definitions of overkill that were directly extracted or adapted from the existing literature, as well as examine basic inter-rater reliability patterns. Only basic pairwise percent agreement was conducted at this stage to assess inter-rater reliability. Due to the fact that the groups of coders did not code the same cases, advanced statistical analysis of inter-rater reliability was not possible. Inter-rater reliability will be re-examined in a later phase of the project in which coding groups will examine the same cases across definitions in order to quantitatively measure inter-rater reliability.

Methods

Data

The data for this research were taken from closed, fully adjudicated state and local cases that were contributed from law enforcement agencies from around the country for the purpose of research. All identifiers, including names of victims, suspects, offenders, officers, departments, and correctional agencies, are removed. Only aggregated data are reported on.

Eighteen homicide cases were selected for this study after meeting certain criteria: 1) the case was a single victim, single offender homicide, 2) where the relationship between the

victim and the offender was known, 3) both a Medical Examiner's report and crime scene and autopsy photos were included in the file, and 4) the victim was over the age of 16. These criteria were chosen in order to allow for the most information that might have been relevant to make a decision regarding the presence of overkill, as well as to keep the cases as similar to one another as possible.

Procedure

Nine Masters' level students were recruited to participate as coders in this study. These nine coders were split into three groups by coding skill level (determined by coding performance on a previous coding project) to ensure that each group had a mix of skill level. Therefore, coders who performed well on the previous coding project were evenly distributed across the three groups, as were those who performed less well. Each group was assigned three different homicide cases: one "regular" homicide, one domestic homicide, and one sexual homicide. This was done to account for any inherent differences in coding that might occur as a result of the type of homicide case that was being coded. Each group was also assigned a different definition of overkill (see below) to code for in addition to other filler variables such as victimology variables, offender background variables, victim-offender relationship variables, and wounding variables which were constant across the three groups. This was done to disguise the purpose of the study, and also to allow for coders to have exactly the same coding experience, with the single exception of the overkill definition.

Phase I. During the first phase of the study, the coders were assigned three cases each and given one week to complete the coding. During this round of coding, the coders were not allowed to ask coding questions of their group members, of any coders outside of their group, nor of the researchers. This was done to ensure that each coder was evaluating the cases and the overkill definitions independently. The coders were told to write down any questions they had throughout the process, and were asked to turn those questions in with their data at the end of the week. After, the coders met with the researchers to discuss any problems they had with the coding process. This discussion was very open-ended and led by the coders instead of the researchers. This was done to ensure the coders were following the definitions appropriately so as to improve on the next round of coding. This was also done to better understand if they found the definitions difficult to interpret and why as this is key to understanding if and how overkill can be applied to homicide cases reliably.

Phase II. During the second phase of the study, the groups were each assigned three new cases and given one week to complete the coding. During this phase of coding, the coders were still not allowed to ask coding questions of their group members, of any coders outside of their group, nor of the researchers. The coders were again told to write down any questions they had throughout the process, and were asked to turn those questions in with their data at the end of the week. After, the coders met with the researchers to discuss any persistent problems they had with the coding process. This discussion was again was very open-ended and led by the coders instead of the researchers. The goal of this discussion, however, was to both inform the coders of the true purpose behind their coding and explain the experimental design as well

as gather more information regarding their difficulties in coding and interpreting the overkill definitions and how that impacted their ability to decide if overkill was present or not.

Coding Using Different Definitions of Overkill. Coders were assigned to three groups and each group evaluated case files for overkill according to one of three definitions that ranged from relatively vague (Definition 1) to more objective (Definition 3). A judgement that overkill was present in a given case was coded dichotomously as present (1) or absent (0). The definitions used by the 9 coders were as follows:

- Definition 1: Overkill is present if the wounds inflicted were beyond those necessary to cause the death of the victim.
    - This definition reflects the most common definition in use (see Ressler et al., 1992).
- Definition 2: Overkill is present if the victim sustained multiple injuries within one or more causes of death (i.e., multiple gunshot wounds) or if the multiple wounds of the same type were distributed over two or more body regions and considered causes of death in each.
    - This definition is taken directly from Jordan et al. (2010) who adapted it from Salfati (2003).
- Definition 3: Overkill is present if the victim sustained at least 15 crushing (e.g., as with blunt trauma) or penetrating wounds (e.g., as with stab wounds or gunshot wounds) inflicted in one or more areas of the body, excluding the extremities (arms/legs), including post-mortem mutilation not designed to conceal the victim's identity with at least two fatal wounds.
    - The threshold for the number of wounds in the above definition was adapted from Laajasalo and Hakkanen (2006).

Analysis. Once the coding rounds were over, in order to address coding issues, an inter-rater reliability analysis was conducted on the eighteen cases. Pairwise percent agreement was used to identify basic patterns in inter-rater reliability. A qualitative sorting-task was also conducted on the feedback from the coders regarding issues brought up at the end of each phase. Items were sorted into groups (themes) that represented similar coding issues. This sorting task was done by two of the original coders independently of the specific overkill definition assigned to the coder.

Results

Inter-Rater Reliability Patterns

Inter-rater reliability could not be quantitatively analyzed beyond pairwise percent agreement at this phase of the study. This is due to the fact that the three groups of coders coded separate cases, thus eliminating the applicability of most statistical methods of assessing inter-rater reliability[14]. The purpose here is to identify basic patterns in terms of coder

[14] The current methodology, in which coder groups coded different cases, prevented the usage of more advanced statistical analyses. Fleiss' kappa was considered, but excluded as inappropriate due to its inapplicability in small sample studies. Cohen's kappa can be used for 3 coders by running the statistic for

agreement on the presence or absence of overkill that will guide identification of logistical problems with the coding of cases for each definition.

Pairwise percent agreement showed an increase in rater agreement from phase 1 to phase 2 of coding for both group 1 and group 3 (increasing in both groups from 56% to 78% agreement), while group 2 showed a decrease in pairwise percent agreement from 78% to 56%. This indicates that whatever issues were present in Definition 1 and Definition 3 - theoretical, definitional, or methodological - were resolved to some degree by the additional training. This was not the case with group 2 which was coding cases using the 'moderate' definition of overkill taken directly from the literature (Definition 2). This could be a by-product of the cases coded by this group that may have been more ambiguous or on the border between overkill and non-overkill, but it could also indicate coding difficulties inherent in Definition 2. As discussed in a subsequent section, coders found the determination of wound lethality problematic in addition to the restriction to specific body areas both of which are included in Definition 2. Overall disagreement between coders did not seem to be linked to the type of case, with one notable exception arising pre- and post-training. During phase 1 all three groups of coders disagreed on the presence of overkill in each sexual homicide case, yet, during phase 2 all groups - regardless of the definition of overkill - showed 100% agreement on the sexual homicide cases. While the current level of analyses cannot make a definitive determination of the exact reason for this, it could suggest that once basic conceptual issues inherent in the three definitions were addressed the presence (or absence) of overkill in sexual homicide cases became easier to identify.

Across definitions, phase 1 inter-rater reliability was impacted by disagreement on which wounds count and which do not, such as whether to count underlying injuries (i.e., hemorrhaging or mutilation). Post-training the issue seems to be less on what wounds to consider but the demonstrable lethality of the wounds. Additionally, there is some indication that decisions on overkill are not linked to how confident coders were of their ratings. Coders were asked how certain they were of their decision on the presence/absence of overkill on a 5 point Likert scale. Only group 1 saw an increase on this measure between phase 1 and phase 2 (means = 3.89 and 4.67, respectively), which again could suggest that the additional training was potentially useful in addressing the logistical issues inherent in Definition 1.

Coding Issues

In order to address any potential coding issues that the coders had throughout the process, feedback was elicited from the coders and underwent a sorting task in order to identify any trends in the feedback. As a result of this sorting task, two main problems were identified: 1) logistical issues related to the mechanics of coding, and 2) conceptual issues with the definitions of overkill (see Table 1). In terms of logistical issues, the biggest difficulty

each pair of coders and then averaging the resulting kappa scores. However, the statistic will not run if one coder shows no variation (i.e., one coder ranks all cases as absent) because it simply treats the coder as a constant. Advice is solicited as to more appropriate statistical analysis that can be used once more data is collected, such as Krippendorff's alpha.

surrounded the lack of understanding the difference between an internal and an external wound (e.g. whether or not to consider wounds to internal organs as separate from external wounds from violence). This was very similar to the issues that coders had with counting wounds (e.g. are an entrance and exit wound two separate wounds or one wound?). Coders also had a good amount of difficulty distinguishing between areas of the body (e.g. wounds that crossed regions, where's the point at which the head area becomes the face area and vice versa?). These issues were pretty straightforward and expected as they tended to come back to the foundational issue of understanding the medical examiner's report particularly regarding the terminology and any noted abnormalities found as a result of the autopsy, which is understandable for those who are unfamiliar with autopsy reports.

Table 1. *Coding issues outlined by coders*

Logistical Coding Issues	**Count**	**Conceptual Coding Issues**	**Count**
Inclusion of external versus internal wounds	14	Definition issues	24
Unsure of how to define body regions	12	Mindset of the offender is missing	11
Counting wounds	8	Definition was too objective/stringent	7
Interpreting terminology used in ME reports	6	Wording of definition was confusing/limiting	8
Confusion on definition of a wound	4	Wounding	18
Does multiple wounds = multiple weapons?	3	Counting/determining fatal versus not fatal wounds	4
		The inclusion of post-mortem wounds	4
		Use of the cut off number was difficult	3
		Distinguishing wounds in various regions	3

In terms of conceptual issues, this additionally broke down into two main types of issues: issues with the definition itself, and more issues with wounding, but specifically in reference to the wounding requirements within the definitions. The main issues with the definition itself interestingly revolved around the lack of subjectivity or inclusion of psychology. Coders' feedback indicated that being able to code overkill based on the definition wasn't difficult, but that they felt each definition was missing what overkill really meant. Particularly, the coders were concerned with the mindset of the offender. Intent, motive, and the offender's knowledge of whether the victim was deceased or not were extremely important to the coders in terms of making the determination of whether overkill was present, and felt that the definitions did not incorporate the element appropriately or at all. Things such as how much time occurred between wounds (implying that the offender came back to wound after the victim's death) and the intention behind the offender's violent actions mattered to the coders when considering the "idea" of overkill. As a result, the coders overall thought the definition

wasn't subjective enough. For example, one coder stated that "the definition was objective, but I felt it was too objective and not totally encompassing the variability that is involved in overkill." This, however, is completely contrary to the goal of those academics and practitioners aiming to develop a standard definition of overkill. Lastly, the coders also struggled with some aspects of the wording of the definitions. The word "beyond" in terms of "beyond those necessary to cause the death of the victim" in Definition 1 caused a lot of confusion among the coders, asking questions such as, "is 'beyond' in comparison to the specific offender's general ability to kill someone?" and "does that mean: in addition to fatal wounds (i.e. more than non-fatal wounds) or more than one fatal injury?"

The main issues with wounding in the definitions focused mostly on the difference between fatal and non-fatal wounds and the presence of post-mortem wounds. The determination of wound fatality was necessary for Definitions 2 and 3, but coders expressed some confusion about whether a wound was fatal or not, and whether fatality mattered in terms of counting wounds. For example, one coder questioned, "does [fatality] matter in terms of what constitutes overkill?" and others claimed that the case did not give them the information to make a fatality determination. There was also disagreement among the coders in terms of whether post-mortem wounding, which was only required to be considered in Definition 3, should be included in the counting of wounds to determine overkill. In fact, the coders admitted to coding post-mortem behaviors differently, with some including them because they felt it was part of the overkill "idea," but others didn't because they felt that "[a] wound is about harm so [post-mortem wounds are] not a wound." The rest of the problems that arose among the coders were specific to the different definitions. The coders who coded overkill using Definition 3 struggled with the cut-off number for wound counting, with one coder expressing that there was an "issue on putting a number on overkill because of the strength of the offender and what object is being used," as the ability of an offender to kill a victim was relative to what overkill should be defined as. Lastly, the coders who coded Definition 2 particularly struggled with the restricting of wound counting to certain body regions, expressing that they felt that the restriction was "contrary to the idea of overkill".

Discussion

The preliminary analyses conducted in the current study revealed that there seems to exist a delicate balance between defining overkill in a discrete, objective manner that will enhance inter-rater reliability and therefore replication across studies while maintaining the general idea of overkill. Based on coder comments, the issues that arose were expected in that by increasing the objectivity when defining overkill diminished the intended meaning of overkill and serves to highlight how ingrained the common definition has become in homicide research.

Among the issues highlighted that are most problematic to the resolution of the issue is accounting for the offender's mental status and intent at the time the wounds are inflicted. This is problematic for obvious reasons - it introduces variables that are not objectively identifiable from medical examiner's reports and crime scene photos. Incorporation of variables that have an inherently subjective nature diminishes the ability to draw empirical links that may be of use

to investigators (Canter & Youngs, 2003) and hinders replication. Moreover, the level of experience and skill set of coders, the inclusion or exclusion of post-mortem mutilation, lethality of the wounds, and weapon use seem to add further confusion to the issue. The first of these issues can be easily addressed by increased coder training. As part of this endeavor to better identify how experience and coder skill set impacts the reliability of overkill identification across definitions, a future study may be conducted to compare inter-rater reliability across groups of coders with different knowledge levels of lethality determination and skill sets in content analysis, such as graduate students in different academic fields, homicide detectives and medical examiners.

The remaining issues discussed above would require a decision on the part of researchers as to whether or not to restrict overkill in terms of the timing of the wounds and weapon use. Should defensive wounds be included in the overall wound count, which some definitions allow? How does one reconcile the issue of offender intent to wound to kill with the nature of firearm deaths where multiple wounds can be inflicted in a matter of seconds? Should mutilation be included provided that it does not have a utilitarian objective (i.e., obscuring the victim's identity)? Is a definitive cut-off point for the number of wounds possible, preferable, or does it impose an arbitrary boundary? These questions, as well as those raised in the preliminary analysis conducted thus far, will guide future phases of the study in an effort to refine the definition of overkill.

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Appetitive Violence: Secrets in the Production and Evolution of Homicidal Predation

Paper presented at the Summer Meeting of the Homicide Research Working Group

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Abstract

Evolutionary biology suggests that lethal violence might evolve out of lower-level conflicts as people seek advantages in mate choice. Appetitive violence, or violence that has become desirable, chosen, or even promoted, is one such example. This might involve incremental reinforcements of violence acts. In this session I will elucidate how appetitive violence might illuminate the ever invisible link between predatory economic power structures and micro-level enactments of violence. The prevention of homicide requires that we understand these linkages and endemic motivations if we are to construct lasting solutions to the homicide problem.

Introduction

The concept of appetitive violence has yet to be directly linked to patterns of homicide offending. Yet, homicide research shows distinct examples of such a phenomenon. This is particularly true in instances of homicidal predation about which, we know little. Predatory offenders consciously and intentionally seek out a person, or group of persons, for victimization. While predation results from deliberate acts, motivations can vary. This means that mass murderers may differ only from solo offenders by the internal drive motivating such an attack.

Historically for instance, people have attributed mass shootings to revenge for past grievances. While this might suit our sensibilities in the absence of empirical facts, offenders may construct or use an array of rationalizations to cover for the true motivations of their actions. Other such covers have been identified (Douglas, Burgess, Burgess, & Ressler, 1992). Sexual homicide offenders may cover the sexual component of their crimes by stealing from a victim or claim that the killing was motivated by money (Drake, 2004, 2015; Geberth 1996; Schleshinger, 2004). Motivations for homicide are varied and may include more than one, or compound factors.

It is well known that violence can emerge out of daily conflicts. However, it can also evolve or change from accidental or reactive violence into strategic violence. Many serial offenders' first kills were of the incidental variety or felt forced (Vronsky, 2004). Later on these offenders realized that they liked or even craved causing the death of another human being. This progression has not been well noticed, perhaps because it is not tied closely to the impacts of the social structure, but rather involves a micro-level psychological theme. The

purpose of this paper is to further explore the evolution of desire for, and promotion of, violence as a way of achieving personal entertainment, or sexual thrill.

The study of violence has identified two types of violence: reactive, and appetitive (Anderson & Bushman, 2002; Fontaine, 2007; McElliskem & Joseph, 2004). In reactive violence the person feeds an emotional need to enact violence to even a score. Appetitive violence is defined as the satiation of a need, drive, or strong desire, in order to bring an agitated emotional or psychological state back to homeostasis and calm. Appetitive violence is not a new concept, although it has not been commonly applied to the topic of homicide.

Definitions

Violence may be grounded in emotion such as is seen in reactive violence involving personal grievances (Block & Block, 1991; Block & Block, 1992; Miethe & Drass, 1999). This would be the like that found in revenge, retaliation, or honor-based homicides. Alternately, violence has often been viewed as a means of self-help (Black, 1983). If viewed in this way it also is instrumental. In this sense violence helps to achieve a personal goal of materialistic or personal gain (Anderson & Bushman, 2002; Berkowitz, 1993), such as in robbery violence. It seems wise to point out that each individual can have multiple or overlapping motivations (see Miethe & Drass, 1999). The propensity of researchers to assign single motives for offenses can be misleading.

Some offenders go one step further to participate in predatory violence. Predation is the act of purposely seeking out a victim without the element of emotion. Violence researcher Rory Miller (2010) divides predation into two kinds—"resource predation" and "process predation." Resource predation overlaps slightly with instrumental violence, but may occur repeatedly over the course of time. Process predation is defined as enjoyment of the process of being predatory.

Appetitive violence is described as "the infliction of harm to a victim for the purpose of experiencing violence-related enjoyment" (Weierstall, & Elbert, 2011, 2). Harm of this type typically leads to the offender developing a preference for it. Offenders not only choose it due to some utilitarian choice, but because it provides satiation of an internal need or desire. This hunger is constructed out of sexual deviance in the form of the paraphilia sadism, though the mechanism of its development is still unclear (Berner, Berger, & Hill, 2003). Satiation of this need leads to a feeling of excitement, euphoria, or wholeness. Therefore, a cycle of violence is further reinforced, and increasingly fueled by emotional (and therefore sexual) need or desire.

One reason to study appetitive violence is that it helps explain cycles of violence, and possibly a mechanism of contagion (Elbert, Weierstall, & Schauer, 2010). Appetitive violence protects actors from experiencing PTSD, because they find violence attractive, freely chosen, and a goal worthy of pursuit. Cruel violence can serve as a protective factor in that combatants who use cruelty are more likely to survive, but use of violence also produces less negative emotional impact or psychological trauma (Hecker, Hermenau, Maedl, Schauer, & Elbert, 2013; Weierstall, Schalinski, Crombach, Hecker, & Elbert, 2012). Victims on the other hand

are experiencing something highly fearful and aversive, which helps account for their enduring negative responses. Therefore, there is a payoff for an offender who resumes killing at a later time as it serves a protective purpose (Weierstall, Haer, Banholzer, & Elbert, 2013).

Examining appetitive violence may reveal how offenders travel a path from reactive violence to predatory violence as they develop into a predator. Not all predators engage in appetitive violence, but those with an appetite are likely to remain predatory. For instance an offender might stalk and kill his rival out of revenge. Although a predatory act, it may be instrumental to achieving his social goal. This leads us to the critical question--how do people become series killers? And, perhaps more importantly, how could they be stopped?

Application to Homicide

Gradually, a process of appetitive violence can lead to homicide. In the recent cinematic thriller, *Nightcrawler* (2014), Jake Gyllenhaal stars as a budding video journalist who is drawn to witnessing and filming the results of violence, and then later violence itself. He enters crime scenes prior to police arrival, videotapes, and then uploads it to the network. He brims over with pride as he imagines the excitement of the viewers as they watch his news clips. With the passage of time however, he becomes more brazen. He soon finds himself rearranging death scenes to get better visual shots. In the end he lures a young jobless protégé and sets up his killing to effect and predict the best possible news story. Clearly, Jake's character has developed an appetite for violence, and the line between appetitive violence and appetitive homicide is paper thin.

For a brash example of appetitive homicide, we turn to war. The "Butcher of Baghdad" was a colloquial term used against Saddam Hussein (Anderson, 1992), but a similar one, the "Shiite Butcher," was also used for one of his underlings operating in and around Haifa Street (Davis, 2011; Roumured return of..., 2010). Abu Dira'a is credited with drilling holes in the sides of human heads as a means of coercing civilians into giving up Sunni traitors. Most soldiers wanted no part of this type behavior. The repeated or appetitive use by Dira'a is apparent in that a specific persona (and title) soon developed. The theatric act of drilling a head is typically played out in a public space such as town square or open plaza. This crescendoing threat was reported to have always ended in death.

War is an easier and more apolitical example of appetitive violence. Moving this concept closer to home provokes stories of homicide by returning veterans, killing by seasoned homicide detectives, and prison guards volunteering to be a death row executioner. Perhaps less controversial, is handiwork of serial thrill killers, and the carnage caused by career assassins.

In any homicide or aggression incident there can be multiple motives involved (Anderson, & Bushman, 2002; Felson, 2000; Hickey, 2010; Keer, Beech, & Murphy, 2013). We perhaps are lulled by major homicide databases that allow only one attribute per concept—one motive per killing. Most killings, however, likely involve hybrids containing primary, secondary, or even tertiary motives.

In the case of Bonnie Parker and Clyde Barrow, bank robbers of the 1930s, although they engaged in instrumental crime, they also achieved thrilling sexual satisfaction resulting from hybristophila (Vitello, 2006). They built intimacy through their daring criminal and deviant acts. Therefore, appetitive acts may pass unnoticed due to over-attribution of the more familiar types of motives such as anger or money. Perhaps part of the process of developing appetitive violence is that, because it can emerge like an invasive species alongside other similar appearing species, it can sometimes develop undetected. The hegemonic embedded nature of appetitive violence, and therefore motivations for killing, can make it difficult to detect. This suggests, amorally, that killing can be fun, and therefore the need to hide it.

The link between macro-economic structures and micro-level behaviors at first seems tenuous. Conservatives such as James Q. Wilson (2013) sometimes challenge that macro effects are irrelevant. But the macro and micro are simply two differing perspectives that should not be conflated. Blau (1987) suggests however, that macro theories can be built on micro ones. Therefore, Mosley (1986) labels these two perspectives as being part of a paradox. A differentiating criterion lies between individuals units and collective populations; micro represents an internal locus, while macro represents external one (Blau, 1987), thereby setting up a political contest of individual versus collective responsibility for criminal acts (Drake, 2015). Collins (1994) cuts to the point saying, that individual behavior is always influenced by the collective social group. Violent appetitive behaviors unfold at the individual, and therefore, micro level. Yet we are ever reminded that individual behaviors occur within an environmental context that too must be recognized.

Times of war highlight one way that appetites for violence and killing develops. At first soldiers are conditioned through boot camp training not only by being provided *permission* to kill—they are *trained* to kill. Later during the context of war (killing) leadership often *removes social control* against killing civilians and prisoners. They create a perception of lack of law. One soldier reported that "combat commanders regarded the laws of warfare as 'unnecessary' and 'unrealistic' restraining devices which could forestall victory" (Bourke, 1999, p. 175-176).

Some soldiers also reportedly obtained pleasure from killing and would boast afterward. One soldier "prided himself on his 'killer instinct…the murderous impulse of the hunter' and his memoirs contained numerous description of killing (the 'jolt of delight' he felt each time he hit a 'bastard')" (Bourke, 1999, p. 173).

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Mass violence: A mixed methods approach to the study of mass victimization incidents

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Introduction

Currently there is no official or consistently used definition or measure which describes or explains events of mass victimization. Over the past few years numerous incidents with relatively high victim counts have been featured in high profile news reports across the country. Between July 2012 and April 2013 there were four highly publicized incidents of mass murder. The movie theatre shooting in Aurora, Colorado which left 12 people dead and 58 injured, the shooting at a Sikh Temple in Oak Creek, Wisconsin left three injured and seven dead, the shooting at the Sandy Hook Elementary School in Newton, Connecticut, which left 26 dead, and the bombing of the Boston Marathon in Boston, Massachusetts, which killed three leaving approximately 140 injured. Incidents such as these, and many more, suggest that events of mass violence are on the rise where multiple victims are either injured or killed (Hickey 1987). It is either this or past incidents have simply gone under reported in news media due to a lack of news worthy sensationalism associated with the events (Dietz 1986; Lundman 2003). Duwe (2000) notes that "…the higher the body count the more newsworthy the mass killing because it is more serious, shocking, and tragic" (p.391). With a death toll of at least three or more victims many mass violent events such as these fall within the definition of mass murder. One source of violent crime news reports, focused on mass shootings, is the *Mass Shootings in the United States Since 2005* report produced by the Brady Campaign which lists multiple victim events that accrue a small or non-existent death count per event, such as a shooting in Winter Springs, Florida in 2012 where two people were killed and one was injured or another 2012 mass shooting in Chicago, Illinois which left eight people wounded and no reported fatalities (Brady Campaign to Prevent Gun Violence 2013, p. 1-3). Similar incidents mirroring these can be found throughout the nation and yet these incidents continue to be collectively overlooked in academic research. In fact, most academic literature regarding incidents of mass violence focus on instances of mass murder. With a relatively unknown number of mass victimizing events which result in a high victim count but not a high death toll, the continued lack of mass victimization definition and interest is surprising and presents a wide spread social problem which warrants further examination. The development of such a measure and definition could have a significant influence on the currently held perceptions of murder, violence, and victimization in the fields of victimology and mass murder. For example, components of mass violent events could be more precisely analyzed to identify why some result in higher fatalities than others, or a more accurate assessment of violent offenders who inflict great simultaneous harm/or injury on numerous targets, just short of killing, would be possible and study in this area could influence official data sources to begin collecting, or more diligently collect, information on victims involved in mass violent events who do not die. With no current definition available it is necessary to build one from the ground up instead of haphazardly testing various possible hypotheses. This entails taking into consideration the image of mass violence presented in news media and what degree of injury or harm inflicted on an individual is necessary to differentiate between a victim and a witness.

To address the lack of attention, definition, and measure in current academic discussions surrounding such topics as victimization and mass murder several questions need to be explored. The following questions are at the heart of this proposed research study.

1) What constitutes an incident of mass victimization?

2) Other than the number of fatalities, is there anything that differentiates incidents of mass victimization from those of mass murder?

In an effort to answer these first two questions a content analysis of mass violent events that appear in news media reports will be conducted in the first stage of this research design.

3) What degree of harm/injury does an individual need to experience in a given violent event before being considered a victim? Using data gathered from the content analysis a survey will be designed to conduct a research study which will in turn be used to develop a scale of injury and incident severity. This scale will provide insight into determining how to identify cases of mass victimization for future analysis based on victim injury and severity of violent incident (Landau & Freeman-Longo 1990).

4) What characteristics or factors of a violent incident affect the total number of wounded or killed victims in an incidence of mass violence? For this final stage in the research design results from the first two stages of the research design will be used to select cases for a secondary data analysis to identify what factors affect incidents of mass victimization. This three stage approach is expected to answer these questions in an effort to produce a valid measure and definition of mass victimization. Since the study of mass murder is structured, valid, reliable, and broad enough to encompass various violent crimes resulting in multiple victims under one umbrella, but not so broad as to create research impeding theoretical or methodological overlap between incidents, it has been chosen to be the comparative measure and model foundation for this study.

All data collected for this proposed multistage study will be from the four year time frame of 2009 through 2012. This timeframe was selected for three reasons. First, the most current available data from NIBRS is data collected from 2012 and the Brady Report only lists news reports from 2005 through 2012. This made 2012 a natural cutoff point for the time frame. Second, should it become necessary to incorporate census data to look at various population characteristics of areas that show high rates of violent incidents the most recent census, 2010, falls directly in the center of the specified timeframe. Lastly, limiting the study to only four years is intended to make this project less overwhelming but should still provide enough data to develop a valid and reliable measure and definition for mass victimization. The first stage of the research design is a conceptual content analysis involving an exhaustive search of local and national news stories produced between the years of 2009 and 2012. Initial sources to be used include the Brady Campaign's report *Mass Shootings in the United States Since 2005,* Mother Jones, Lexus Nexus, USA Today, Every Town: For gun safety, PoliceOne.com, MSNBC, CNN, and various local and state news sites. Incidents that report a minimum of three victims (injured and/or killed) will be cataloged and coded. Though it is currently unknown how many news stories will be included at this stage it is estimated that a sample size of approximately 1,000 news reports will be procured through nonprobability purposive sampling. Once the manifest content has been coded frequencies and descriptive statistics will be calculated to identify any patterns or trends among incidents of mass victimization and further identify any differences between incidents of mass murder and those

of mass victimization. Next is to identify what components of mass violent events significantly affect the resulting number of victims. To accomplish this an ordinary least squares regression will be conducted and incidents of mass murder will be controlled for.

The second stage of this proposed research study revolves around the construction and issuing of a self-administered survey tool which is intended to identify the varying levels of mass victimization based on severity of injuries accrued during an event and what types of incidents are perceived as more serious than others (Wolfgang, Figlio, Tracy, & Singer 1985). Results of the content analysis will be used to develop the survey tool for this stage of the analysis. Results of the content analysis will be used to develop the survey tool for this stage of the analysis. The survey tool will be issued to known researchers of murder and mass murder after first obtaining approval from the colleges' institutional review board. It is difficult to say how large the sample for this portion of the study will, or is expected to, be. However, this group of specialized individuals has been selected because of their expertise and their vast wealth of knowledge and experience which can only add to this project. Primarily, this survey is intended to produce a scale that can be used to address the question of: To what degree of harm/injury does an individual need to experience in a given violent event before being considered a victim and what types of violent incidents are considered more severe than others? The scale can then be used to identify incidents of mass victimization based on victim injury and the varying components of the violent event.

In the third stage of the proposed research design is a secondary data analysis using data obtained from the National Incident-Based Reporting System (NIBRS) and the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF). Data for NIBRS will be gathered from the Interuniversity Consortium for Political and Social Research (ICPSR). Data will be requested from the ATF in regards to bomb related injuries and deaths. Data for the years of 2009-2012 will be extracted from these sources based on the parameters identified in the content and survey analyses. Results from the content analysis and survey will be used to construct a sampling frame used to identify and select cases for the secondary data analysis. The purpose of this final stage of the research design is to identify possible factors or characteristics which may affect mass victimization incidents, specifically the number of wounded or killed victims per event (Delisis & Scherer 2006). All cases where victims are reported as suffering some form of physical injury including but not limited to rape, aggravated assault, assault, and attempted murder will be extracted to generate the research sample. As the format of the data from the ATF is currently not known it can only be assumed that the same or similar criteria can and will be used to extract cases which will fit the research parameters. Once these data are gathered they will be merged into a single data set. As with the first two stages of this research incidents of mass murder will be included in the sample.

This project is expected to identify similarities between the two phenomenon of mass victimization and mass murder and what similar factors affect victim count per incident. The outcome of this research will result in a working definition and measure of mass victimization which can and will be tested to identify underlying patterns in this type of victimization. The methods outlined here have been constructed in order to build the definition and measure from the ground up. As such, this measure can be used in future research to understand the nature of

mass victimization in our society. It is important to note that this study excludes data on mass victimization caused by natural disasters, incidents of terrorism, war, and mass casualty incidents which occur outside of the United States.

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Q&A Panel Session 7 – Theoretical and Measurement Issues in Studying Homicide
Chair: Jeff Osborne - Recorder: Jolene Vincent

Recorder Notes: Jolene Vincent

Presentation 1: Overkill, We Know it When We See it: Quantifying Excessive Injury in Homicide - Kimberly Schanz, Carrie Trojan, and C. Gabrielle Salfati

Q: (Candice Batton): Can you talk about the implications of the research?
A: Having a more objective definition of overkill. Her latest study looked at severity of injuries, but two most severe classifications included overkill. They wanted to recode, and disagreements were made about what overkill actually meant. Need a consistent definition.

Q: (Lin Huff-Corzine): Must look at context of the situation, like in a domestic violence case. Police officers reactions are important to note. Gave example of offender who was in a 250 truck and the offender may have fell asleep with foot on pedal, therefore he was still pushing the 250 truck against the police officer's 150 truck, even though he was dead. This was not overkill, because they had to keep shooting until offender stopped, but it would be looked at as severe overkill due to amount of gunfire, but from the context of the situation, it is not overkill.
A: Also, must look at psychological issues. Do not know if offender was aware the damage they are still causing. Will eventually look at differences in context.

Q: (Michael Becker): Curious about psychology students coding, maybe forensic students would have more experience with the coding
A: Forensic pathologists did not conduct the majority of research on overkill, it was done by academics. Overkill exists, but we are relying on judgments. Would be interesting to see a comparison between two groups (such as psychology and forensic students).
-Michael agreed.

Q: (Wendy Ringgenberg): With so many variables, it could be beneficial to come up with numerical coding system, which could identify the situation better and make comparisons more accurate.
A: A study in Sweden looked at this with 15 being average and anything more is overkill.
Wendy- Would be nice to have ranking system and compare cases with numeric values.
A: May have to take that route, looking at gunshots and stabbing wounds and results of attacks have differences in fatality and contexts. Look at weapon, wound, and fatality.

Q: (Chris Rasche): Complaints may come from the students not knowing how to code and would be interesting to replicate the study with sociologists, engineering, and nurses, who may have better understanding and not be obsessed with the mindset component. Complaints may come from frame of reference that the students have.
A: Australia has done studies with people of different expertise and how to profile them. Freshman chemistry profiled better than forensics students.
Chris- Take normal graduate students from different majors who have frameworks not obsessed with mindsets, but may have better coding abilities.

A: Biology vs. sociology students would be interesting to see.
Chris: Math & engineering students would provide different feedback as well.

Q: (Amber Scherer): (Who previously worked with the dataset) You had many issues with coding, reliability, training in phase 1 &2: do you have any issues with students having coding issues that may affect the dataset?
A: Overkill is not a common variable coded, but they have seen issues with variables that have a vague level of knowledge because the coders think it over too much. But, they spend time training students to stop thinking (ignore intimate relationships among victim and offender).

Q: (Mindy Weller)- Did you include superficial wounds like bruising, self-defense, not penetrating, and how do you account for them?
A: Definition included penetration or crushing of skin (taken from Sweden study), bruising, and penetrations all count, but must be visible or underlying.

Presentation 2: Appetitive Violence: Secrets in the Production and Evolution of Homicidal Predation - Dallas Drake
Q: (Vance McLaughlin): George Orwell(?) wrote about experiences as a Police Officer, he spoke about his experiences with killing another man. He would try to put himself in situations where he would be more likely to do something. Most people in law enforcement do not want to talk about it and same with military. But, when you find someone who dwells on it, it might fit in to appetite to violence.
A: Boot camps train people to kill, but less than 10% of American soldiers actually fired weapon that would kill. Most people do not like to do that, but some do and they kill a lot of people.

Q: (Dick Block): Dave Canter(?) in England used basic models to describe appetites for homicide and the increase of the thrill and changes in violence levels. Other people were already discussing the model of the appetite for homicide.
A: Crime structure, meaning the structure of crime environment, and same crime rates of areas with police officers that change our social patterns.
Dick: Nature of crime is not recognized due to high level of crime in the environment.
Dallas: Correct.
Dick: 1997 or 1998 or both, in Chicago, with high crime rates, the devil in the devil in the white city(?). The devil was the first known serial killer. He built hotel to specially kill people with trap doors. 100 years later, 3 serial kills operating in high crime area, and they (law enforcement) did not recognize the pattern. The environment allowed freedom to kill.
Dallas: Very few members of organized crime actually kill it is always same persons.

Q: (Michael Becker): Can you touch on child soldiers?
A: Children were trained to be soldiers to try to gain power over environment where in process of killing they decide who, when and where the killings took place. They feel power and protected from the violence. After war ends, they still like violence. They have hard time coming back from the war. Some people found their purpose.

Q: (Chris Rasche): Develop a model that uses context like a high crime area and people who can do this. It ignores serial killers who are opportunists (like doctors and nurses who kill, like in England case, or women serial killers who take in people). Some have economic motives. Other people pass through and do this same thing; can your model fit this?
A: Yes, this is one way where it is activated. Trauma could occur from death, sexual assault, and they try to regain control over themselves and the situation. They are psychopaths who feel out of control and finally use killing to assert control.

Q: (Claire Allely): What predicts a serial killer, such as fantasizing vs. actually committing the crime. What do you think prompts them to take next step? (What is activation?)
A: Most spontaneous, had an angry outburst, no positive feelings.
Claire: With Jeff D. do you think his parents divorce caused that?
Dallas- Trying to regain control over the social isolation and does not want a person to leave. Other examples in Germany, where he was walking his best friend who escaped boarding school, he pushes his friend in front of train to try to kill him. Later, he tried to find people to kill because he liked pushing him in front of the train. He started looking for victims.
Claire: What clusters of factors do you think cause this?
Dallas: Sexual sadism. They try to control environment like in a psychopath. Must look at data for periods in between killings to see what might have triggered this (each attack).

Q: (Kathleen Heide): (comment) Look at how someone has motive to kill and social learning theory. Looks at routine activities theory. What makes them motivated to commit crimes? How does someone become interested in sexual offending and how does it come about?
A: Trauma control model by Hickey(?) used in these situations. Incubation period may occur where they think of last experience, high crime rates, and how easy to get away with it.

Presentation 3: Mass Violence: A Mixed Methods Approach to the Study of Mass Victimization Incidents - Mindy Weller

Q: (?): What causes US Congress to come up with definition of mass murder? Was it because of Boston bombing killed three?
A: At first that was the assumption as it came out right after Boston bombing. But, it seems that federal law enforcement agencies could easily help with cases with only 3 victims. Many jurisdictions face problems with asking for higher assistance.

Q: (Chris): Please show me revised title. Chris: Violent mass victimization would occur with what happened in Dallas this morning, where a single person attacked police station and shot it up with automatic weapon. Many may be traumatized, but not dead. It sounds like you are interested in mass murder not victimization.

A: My focus will be on those physically injured due to difficulties with measuring other injuries. Data is difficult so I am sticking with people who are injured and to what degree. Wants definition to be able to change over time
Chris is still confused. Would you include where people COULD have been killed or just where they were killed?
A: Mass murder will be used as comparison. She has to stick with injuries that are countable but wants to broaden it to other possibilities. Asking for information and data from ATF about bomb information. Without access to data, does not want to put out there yet

Q: (Dallas): With using news reports, talking about teachers with guns. The police lie and reporters reporting what they say.
A: Will take a look at that.

Q: (Micheal Becker): This is a step towards a better definition of mass victimization, this is trying to make use of available data. Who may have been non-injured victim? Great step in right direction.
A: You're Welcome!!!!!!!!!!

Q: (James McMutcheon): You are early in process, but you will use 3 different data sets to help create definition, how will you weight the different sources? Do you know yet?
A: No, not yet. Must get hands into data first.
James- What we know about media, why are you including it?
A: They have the context and more rich information on location, offender motivation, age, race, sex, location, time, area. SHR gives small amount of data that needs to be explored more.

Q: (Becky Block): She is confused. Started with methodology, then go to NIBRS, and said with looking at NIBRS, going to look for media cases in NIBRS? Is that what you said?
A: No. She is looking in media for emerging similarities, themes, characteristics, and then can use context analysis to make survey to scale injury and other parts.
Mindy- Want to make sure it can be supported before she starts jumping into further research and it is solid foundation.

Poster: Online Marketing of Death Scene Cleaning Services to Private Residences

Chelsea J. Nordham, University of Central Florida
Adam J. Pritchard, University of Central Florida

ABSTRACT

When medical examiners and law enforcement personnel respond to homicide and suicide scenes to remove bodies, the aftermath of crime scenes include areas in need of cleaning from blood and/or bodily fluids. Though emergency medical personnel and sanitation workers rectify trauma scene messes in public spaces, homicide and suicide messes occurring in private residences leave property owners responsible for the cleanup. Cleanups by family and friends are emotionally difficult and physically dangerous; individuals without training in biohazards should never clean crime scenes due to risk of serious illness or death. As a result, private businesses recognize the cleanup burden placed on family and friends by selling biohazard-cleaning services targeted for trauma and crime scenes. By using quantitative and qualitative content analysis, this study documents a variety of website content characteristics of the twenty most relevant companies for crime scene/trauma cleanup services identified by Better Business Bureau in the United States. Website content such as types of cleaning, crimes, emergency services, safety procedures, training/certification of workers, as well as mention of family/ friends and offer of support services are considered. Results provide an illustration of how private businesses market services to individuals under the emotional conditions of trauma and physical conditions of human remnants and fluid messes. Implications of this study and directions for further research in the area of victimology and criminal justice responses to crime scenes are discussed.

Introduction & Background

Homicide and suicide incidents are unique death-related experiences for family and friends of individuals who pass away through unnatural incidents. Past research in homicide studies has not focused on the aftermath of homicide in general, or on family and friends, though a recent study by Mastrocinque et al. (2014) conducted focus groups with families and friends of homicide victims in order to explore biopsychosocial consequences, experiences with service providers, and the ways that their needs were addressed. When homicides or suicides take place in private residences, police and medical examiners assess the scene and remove bodies, but clean-up of human debris is the responsibility of the private residence's owner, unlike public spaces that are cleaned by municipality through emergency medical services personnel (Miletich 2003). The National Institute of Justice's guide for death scene investigations, investigators are required to follow exit procedures that include alerting family or authorized individuals of potentially unsafe scene conditions and to not leave family or authorized individuals alone with a body. Additionally, investigators are advised to inform family or authorized individuals of services such as victim assistance, social services, police, and death scene cleanup services (National Institute for Justice 2009). In conclusion, family, friends, or property owner are obligated to deal with death scene cleaning.

Death cleaning services are part of an industry that supplies an array of specialty cleaning services that generally requires training and certification. At crime and trauma scenes, businesses clean and decontaminate private residences where homicides, suicides and other

incidents where blood and bodily fluids took place. In 2013, Island Trauma Services in New York City made more than $500,000 in profit. They employ around thirty people, which make between $35,000 and $80,000 as biohazard technicians (Khan 2014). In a news story on Island Trauma Services, a worker described the most difficult part of the job as the people: "some people will be in shock, some will break down, some people will get in there with you and clean because it was somebody they knew. That's probably the hardest thing, but if we've done it right, it's a hug-fest by the end of the job" (Khan 2014). There are no other known studies on the ways that death-cleaning services market services to clients. This study attempts to illustrate the descriptive qualities of websites that sell and provide homicide and suicide cleanup services.

Research Questions and Hypotheses

How do private companies market cleaning services for homicide and suicide incidents to private residences in regards to website appearance and vocabulary?
Do private companies market cleaning services for homicide and suicide incidents to private residences by appealing to physical and emotional needs of clients?

Hypothesis 1:
Private companies will market death scene cleaning services to private residences by mentioning family/friends/acquaintances of homicide or suicide victims.

Hypothesis 2:
Private companies will market death scene cleaning services to private residences by mentioning safety and health standards, as well as certification of staff.

Hypothesis 3:
Private companies will market death scene cleaning services to private residences without mentioning criminal justice system personnel (police, EMS, or CSI).

Method: Sample Selection and Coding Procedure

Websites marketing death cleaning services were extracted from the Better Business Bureau (BBB) by searching the preexisting category "Crime Scene/Trauma Clean Up". The Council for Better Business Bureau's explains their mission as "dedicated to fostering honest and responsive relationships between businesses and consumers, instilling consumer confidence and contributing to a trustworthy marketplace for all" (Council for Better Business Bureaus 2015). Thus, websites approved by BBB hold legitimacy that verifies that each business is operating and maintaining standards that meet the needs of clients, which would not have otherwise been provable from a large search engine search.

The first four websites from the BBB search were selected based on location. Location was selected by searching the five most populated cities in 5 regions of the United States according to the 2013 Census (United States Census Bureau 2013). The rationale for this selection was that death-cleaning services are likely to be necessary in highly populated areas. The five regions and cities within are Northeast (New York City), West (Los Angeles), Midwest

(Chicago), South (Houston), and Mid-Atlantic (Washington D.C.). This resulted in a total sample of 20 websites. Variables were developed in regards to website appearance and vocabulary, as well as in relation to physical and emotional needs of clients.

Website Appearance and Vocabulary

The overall look of the website was assessed by coding for photographs on the webpage, overall dark color of the webpage, engagement features (videos and sound), social media accounts listed on webpage, and personal story of the company. Coding for mentions of police, emergency medical services, crime scene investigators, murder, homicide, suicide, unnatural death, blood, bodily fluids, and biohazards were assessed as vocabulary used in regards to death cleaning services.

Physical and Emotional Needs of Clients

Death cleaning service businesses' mentions of physical and emotional needs of clients was evaluated by coding for mentions of safety, 24/7 hour operation, family/friends, compassion and/or trust, biohazard certification of staff, costs/pricing, and finally, mentions of community.

Discussion and Conclusion

Table 1 features descriptive statistics. Variables were examined that addressed website appearance and vocabulary and mentions of physical and emotional needs of clients searching for death cleaning services. Research questions 1 and 2 were addressed through valid percent findings. Website appearances were mostly light colored with pictures and links to social media accounts for the business. Websites hardly used videos and sounds to engage clients. As for vocabulary, websites utilized the words homicide, suicide, blood, bodily fluids, family/friends, and costs/pricing nearly half of the time. The words police, emergency medical services, crime scene investigators, murder, unnatural death, and community were used less than half of the time. Mentions of safety, biohazards, 24/7 hours of operation and staff certification were found the most. Overall, mentions of community were the least presented and staff certification was the most presented on webpages.

Hypothesis 1 proposed that private companies would market death scene cleaning services to private residences by mentioning family/friends/acquaintances of homicide or suicide victims. This was not supported, as family and friends were mentioned less than half of the time (40%). Hypothesis 2 predicted that private companies would market death scene cleaning services to private residences by mentioning safety and certification of staff. Hypothesis 2 was supported, as staff certification was mentioned 80% of the time and safety was mentioned 60% of the time. Hypothesis 3 assumed that private companies would market death scene cleaning services to private residences without mentioning criminal justice system personnel (police, EMS, or CSI). This hypothesis was also supported, as police were only mentioned 25% of the time, EMS 10% of the time, and CSI 15% of the time. Findings show that online marketing of death cleaning services emphasize staff certification and safety while using pictures and social media accounts on webpages. Death cleaning websites also use the words "homicide" and "suicide" more than the words "murder" and "unnatural death". Therefore, online marketing of death cleaning distance services from criminal justice personnel and the emotional needs of clients.

Table 1. Descriptive Statistics of Websites Marketing Death Cleaning Services

Website Appearance	**Attributes**	**Coded**	**Valid Percentage (Frequency)**
Photographs	Yes	1	100.0 (20)
	No	0	00.0 (0)
Dark Color	Yes	1	30.0 (6)
	No	0	70.0 (14)
Videos/Sounds	Yes	1	25.0 (5)
	No	0	75.0 (15)
Social Media	Yes	1	60.0 (12)
	No	0	40.0 (8)
Company Story	Yes	1	55.0 (11)
	No	0	45.0 (9)
Website Vocabulary			
Police	Yes	1	25.0 (5)
	No	0	75.0 (15)
Emergency Medical Services	Yes	1	10.0 (2)
	No	0	90.0 (18)
Crime Scene Investigators	Yes	1	15.0 (3)
	No	0	85.0 (17)
Murder	Yes	1	15.0 (3)
	No	0	85.0 (17)
Homicide	Yes	1	45.0 (9)
	No	0	55.0 (11)
Suicide	Yes	1	60.0 (12)
	No	0	40.0 (8)
Blood	Yes	1	50.0 (10)
	No	0	50.0 (10)
Bodily Fluids	Yes	1	45.0 (9)
	No	0	55.0 (11)
Unnatural Death	Yes	1	15.0 (3)
	No	0	85.0 (17)
Safety	Yes	1	60.0 (12)
	No	0	40.0 (8)
Biohazards	Yes	1	65.0 (13)
	No	0	35.0 (7)
Client Needs			
24/7 Hours	Yes	1	75.0 (15)
	No	0	25.0 (5)
Family/Friends	Yes	1	40.0 (8)
	No	0	60.0 (12)
Compassion/Trust/ Sensitivity	Yes	1	45.0 (9)
	No	0	55.0 (11)
Staff Certification	Yes	1	80.0 (16)
	No	0	20.0 (4)
Costs/Pricing	Yes	1	50.0 (10)
	No	0	50.0 (10)
Community	Yes	1	5.0 (1)
	No	0	95.0 (19)
Total Websites			100.0 (20)

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Minutes of Business Meetings

Homicide Research Working Group, June 2015 Meeting in Clearwater, FL

Minutes taken by Dallas Drake, Secretary

First Business Meeting – June 11, 2014

The meeting was called to order by Greg Weaver, HRWG President.

Announcements:
1) Thank you to the local arrangements and programs committee members
2) Weaver announced changes in the order of the agenda

Minutes of the last meeting – motion to approve by Richard Hough and seconded by Lin Huff-Corzine. Motion passed.

Committee Reports

A. Publications

Presented by Lin Huff-Corzine. The proceedings of previous conferences are now posted on the HRWG website. The 2015 Proceedings will also be up soon. The proceedings are still missing from 2006 and 2009. Jeffrey Osborne is now the Book Review Editor.

B. Site Selection

Presented by Jay Corzine. James McCutcheon is working on a Memphis proposal. St. Louis is a possibility for a 2017 meeting. An alternate for 2016 is to be back at Clearwater at the Sheraton Sand Key Resort. John Jarvis has inquired of hotels inn St. Louis. The Drury Inn & Suites is $189 per night, with on-site parking at $16 per night. (These are 2015 rates). There would be free use of business space, and there is a large lobby area. Another option is at the Hyatt for $149 per night, and a minimum food bill; It is similar location-wise to the Drury. Both hotels are quite similar. Although car parking is $29 per night, using light-rail from the airport saves transportation costs. There was discussion about special events; maybe a presentation about Milwaukee homicides. An idea was floated about New York City as a possible meeting location. Costs were discussed.

James McCutcheon reported that Memphis has a lot of crime (apropos for a homicide group), BBQ, blues music, the Peabody Hotel or Westin Hotel, both right downtown. Their police department has a real-time crime center. There is a penal farm called Parks & Prison, and of course Graceland. The costs are probably low in comparison to other options.

Kathleen Heide volunteered to checkout cost for the Hilton in New York on 6th Avenue.

Corzine said that according to John Jarvis, the 2016 conference dates will be June 8-11th.

C. Membership Committee – postponed until the second meeting.

D. Nominations & Elections Committee

Becky Block reported that Melissa Tetzlaff-Bemiller and Dallas Drake were re-elected. Due to staggered terms, next year we will be electing for the positions of President and Vice President.

Tom McEwen reported that the Richard Block award this year goes to Ashley Mancik for her master's thesis, and Jeane Gerard from University of Naughtingham for her dissertation. McEwen noted the high quality of the awardees work.

E. Program Committee

Candice Batton and Wendy Regoezci were co-chairs of the program committee. No report. The group expressed much thanks for their work on this year's program.

F. ASC Coordination Committee

Jay Corzine reports that there will be an HRWG ASC reception in Washington DC in November and Greg Weaver is working on this. They are checking on possible locations for the reception, along with a list of restaurants. Regarding the booth at ASC they are trying to get one or more tables in the hallway just outside of the booth area. This provides better visibility for our group. The conference hotel is the Hinckley Hilton in DC. Becky expressed concern about representation of HRWG in the sessions. There was discussion of whether organized sessions can be sponsored by HRWG. It was also suggested that we send a tickler or solicitation for program participants. Chris Rache advised that we need to first check with ASC to see if we can sponsor or maybe include an insert into the conference packet. Chris Dunn thinks it may cost a little for permission to put a flyer in the packet. Becky Block asked Jay Corzine whether we would get a room for a presentation. Jay Corzine said that it was not a problem. Greg Weaver agreed to look into labeling a sponsorship for a complete panel.

G. Communications Committee

Dallas Drake – no report

H. Marketing Committee

Presented by James McCutcheon reports that HRWG made approximately $1,500 at the ASC last November. They are selling a few at this current meeting as well. He wanted to thank all of the committee participants. They are planning to promote more pre-ordering in an attempt to lessen the bulk of the pack that must be shipped each time. The idea of HRWG beach towels for this conference was scrapped due to excessive production costs. Online sales of merchandise has been considered, but according to Melissa, we aren't there yet. Amber Scherer asked whether there were any new items to be sold. The committee has considered coffee mugs, shot-glasses and flash drives. James McCutcheon noted that all ideas will be considered.

I. Carolyn R. Block Award

There is no award issued this year. Weaver suggested that former recipients sit on the nominating committee.

J. Practitioners Committee – no report (Amanda Farrell not able to attend)

K. By-laws Amendments

Presented by Chris Rasche – Current amendments are a byproduct of last year's tie election vote and no protocol to deal with it. The suggested revisions for Article 8, Section C. There also is new language for Section D.

L. Committee sign-up sheets were passed around the group.

M. International Association of Chiefs of Police Liaison – No report.

New Business (Weaver)

A question was brought up what the group thought of creating an intern position. Chris Rasche asked whether it would be paid or unpaid. Weaver responded that everything is on the table. Kim Davies asked where or who would that be. Weaver suggested that it could be distanced. Details need to be worked out. Amber Scherer asked whether there could be two interns rather than one. Weaver indicated yes. Lin Huff-Corzine suggested that it could also be for college credit.

Weaver presented on the possible development of a HRWG service award. One question is whether it would be annual or periodic. Kathleen Heide asked if Weaver wanted a committee. Weaver said yes. Chris Rasche suggested that language should be included indicating that the award does not have to be given every year. Weaver said they will add it to the committee list.

Meeting Adjourned.

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Minutes of Business Meetings

Homicide Research Working Group, June 2015 Meeting in Clearwater, FL

Minutes taken by Dallas Drake, Secretary

Second Business Meeting – June 12, 2014

The meeting was called to order by Greg Weaver, HRWG President.

Committee Reports Cont'

A. Homicide Studies

Wendy Regoeczi is passing the editorial torch to Lynn Addington. Lynn Addington thanked the group for the opportunity that HRWG provided her to develop as a student. Thanks were expressed to Wendy who brought the Journal online during her tenure.

Wendy Regoeczi submitted a report on 2015 Homicide Studies. For the year, 55 manuscripts were received. Manuscripts decisions (excluding those for the special issue) included eight accepted, one conditionally accepted, nine revise and resubmit, 30 rejected, and seven reject without review. The average number of days from submission to decision was 51 days. Submissions by country included: United States 35, United Kingdom eight, Brazil two, and Canada three. Countries submitting two each included Brazil, Netherlands, Sweden, India, and Turkey. Countries submitting one each included Hong Kong, Jamaica, South Africa, Australia, Columbia, Japan, Portugal, and Saudi Arabia.

The impact factor for the journal Homicide Studies continues to increase. In 2014, the Impact Factor of the journal was 1.154 compared to 2012 at 1.054. The journal was ranked 22 out of 42 in the Journal Citation Report's Criminology & Penology category. The 2014 IF represents a 9.49% increase from 2012. Other information was provided as to the most accessed articles and top 10 journals that cited Homicide Studies articles.

A report was given of the last five months of 2015. (January-May). It revealed that 22 manuscripts were received. Ten decisions were made (excluding decisions on 2014 revise and resubmit manuscripts). Of these three were revise and resubmit, two were rejected, and five were rejected without review. Fourteen of the submissions came from the United States, three from Canada, and one each from Australia, Chile, Hungary, Pakistan, and Portugal.

B. Publications Committee

Lin Huff-Corzine reported that the submission deadline for the proceedings and recorders' notes is August 1st. It will be ready no later than the ASC conference in November.

C. Membership Committee

Jackie was unable to be here. Greg Weaver delivered the report. Updating and streamlining the membership database is a process. Jackie Schildkraut is webmaster for the HRWG website. Creating a template for the proceedings is being discussed because formatting issues are always a challenge given the various programs and versions used to create submissions for the proceedings.

D. Treasurer's Report

Melissa Tetzlaff-Bemiller is treasurer. She reports an account balance at the end of 2014 of $46,117. As of June 2015 the amount is now $69,436, keeping in mind there are expenses occurring for the conference which may not be accounted for. Last year we really worked on membership promotion and so that is a bit higher. Conference costs, although they fluctuate, balance out in the end. Renewals now require a credit card security code and this may temporarily disrupt automatic renewals. There were 50 registrants for today's meeting.

Kathleen Heide asked about cost of the conference and whether they are being subsidized by HRWG or are they self-supporting. Candice responded that it is not realistic to be self-supporting, but it is important to keep them affordable. These meetings are important. Roland Chilton asked that better contact information be included on our website. Due to security concerns, Kim Vogt suggested maybe including only a P.O. Box. Melissa is concerned about exposure to being stalked. Renewals will now be in January, not December.

E. IACP Advisory Committee

Tom McEwen reports about the International Chiefs of Police that an attempt to increase NIBRS participation are focusing on NCSX—a program wherein 400 departments, that if they contributed, would make NIBRS nationally representative. IACP is working on obtaining funds to help make that happen. Four hundred agencies have already been selected. Costs are being estimated.

A question by Becky Block asked whether there was any question about HRWG sending a representative to IACP, to which McEwen responded "no" we will be continuing.

F. Bylaws Vote (concerned mostly technical changes related to tie elections)

Candice Batton moved and Richard Hough seconded to accept the proposed by-laws changes. Motion passed with none opposed.

G. Meeting Site Selection

Jay Corzine suggested that the Drury be the conference hotel for 2016; Roland Chilton moved and Chris Rasche seconded, but then Roland withdrew his motion. Chris Rasche moved that St. Louis be the 2016 meeting site; Becky Block seconded. Discussion included Kathleen Heide reporting that there was no update on New York as a possible location. The vote was called and with three abstaining, the motion passed. A motion was then made by John Jarvis to go to Drury for the meeting in St. Louis. Dallas Drake seconded and the motion passed.

According to James McCutcheon, Memphis is willing cosponsor a conference there. Program chairs for 2016 at St. Louis will be Sara Ann Sacra & Jay Corzine. The theme will be "Gateway to Understanding Homicide," with the idea courtesy of Timothy Keel. Becky Block asked about the alternatives for 2017 and beyond, and whether or not we can make it official. The options at this point are New York, Memphis, or a return to Clearwater, although New York has been dropped now due to cost.

H. Intern & Service Awards

Greg Weaver will appoint an ad hoc committee. Discussion followed: Wendy Regoeczi asked if we can format the 5-page summaries submitted before the conference. Weaver agreed that this is a good idea.

I. New Business

Becky Block suggested that past minutes should be put on the website so they are available to everyone. Amber Scherer said that we could even use a password protected area of the website to allow this to happen. Roland Chilton asked how we handle the membership list and said that it seems secretive. Weaver will appoint a committee to address this. Melissa Tetzlaff-Bemiller said that she has an up-to-date list available to anyone who asks for one, but that some members ask their membership to not be public. Kim Vogt says that she thinks we have an existing policy on this in year's past and that we should first check the minutes. Tetzlaff-Bemiller said that attorneys sometimes calls to verify whether the person is a member of HRWG or not. Chris Rasche indicated that some people are stalked and that it might be like school students' confidentialty. Davies said that confirmation is needed by the Universities on occasion for tenure. Becky Block said we should add a members only section as many other organizations do.

Meeting Adjourned

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