

Gun Violence Reduction Strategies

Annotated Bibliography

Compiled by

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INTRODUCTION

Levels of gun violence vary across regional, national, and international jurisdictions. Recent media attention drawn to mass shootings in the United States has renewed interest in firearm related violence and death. The United States experiences approximately 30,000 firearm related deaths and suicides a year. Nevertheless, for the past two decades, researchers have had difficulty in conducting research in this area following a moratorium on funding from the Centers for Disease Control and Prevention (as advocated for by the National Rifle Association). This is now set to change as President Barack Obama has released a national plan to reduce gun violence and re-instituted funding to facilitate research on gun violence prevention. Available evidence indicates that the availability of guns (both in the home and “on the person”) contribute to the prevalence of firearm related violence. Effective measures to reduce gun violence include prevention measures, such as poverty and gang reduction strategies as well as targeted enforcement by the police. However, as research has been limited by a funding freeze, our knowledgebase has been limited also. Several areas of future research on gun violence prevention have been identified. These include identifying the causes of gun violence (such as the impacts of mental health, video games, violent media images), developing a better understanding of how and when firearms are used in violent death, identifying appropriate prevention strategies to reduce gun violence and translating said findings into effective policy.

This annotated select bibliography on the gun violence reduction strategies was a collaborative project by PhD candidate Akwasi Owusu-Bempah, professor Scot Wortley, five of their undergraduate criminology students and the Centre of Criminology’s librarian. The scope of the bibliography included selected, academic, multidisciplinary, peer-reviewed literature from the 1970s to the present. Based on pre-determined topics formulated by the research team and Nadine Pequenezza of Hit-Play Productions, the literature search focused on materials from North America but included relevant articles from other jurisdictions. An attempt was made to include articles that contained empirically based research, either qualitative or quantitative. The search terms used are listed at the beginning of each section of the annotated bibliography.

The results of the literature search are organized into ten separate subject categories as developed at the outset of the project. The initial searches were conducted by the undergraduate students in conjunction with the Centre of Criminology Librarian. Each student was responsible for compiling two specific sections of the annotated bibliography. Once complete, the students forwarded the results of their initial searches to Owusu-Bempah who checked the material for relevance and duplication. Once reviewed, the results of the searches were sent back to the students who then wrote the annotations. Once complete, the students then forwarded their annotations back to Owusu-Bempah, who assembled and reviewed the bibliography. Professor Wortley conducted a review of the final bibliography, adding and removing material where necessary. An attempt was made to exclude duplication however in some cases articles were clearly relevant to more than one section, and some duplication exists.

The end result is a broad annotated bibliography including most of the significant literature of the twenty-first century on the effectiveness of strategies to reduce gun-related violence.

CIVILIAN HANDGUN BANS AND GUN VIOLENCE

This section refers to scholarly materials regarding the impact of banning civilian handgun ownership and its effects on reducing firearm violence. The majority of the sources listed are peer-reviewed academic articles and mostly from Canada and the United States. All materials contained within the bibliography are in English, listed in alphabetical order by author and co-author. The databases utilized for this bibliography include: ProQuest, JSTOR, Google Scholar, and Scholars Portal (including Sociological Abstracts, Criminal Justice Abstracts, Criminal Justice Abstracts, and Social Sciences Abstracts). The terms used to search for relevant material include: handgun; ban; ownership; gun; firearm; violence. Due to the scarcity of data listed under handgun ownership and handgun violence, data was also collected from the broader terminology of “gun ownership” and “firearm violence.” Though the two do not necessarily correlate to mean the same thing, unless specified otherwise, “gun ownership” was accepted as a term signifying handguns. However, to distinguish the literature, the annotations using the term ‘handguns’ were specifically noted as handguns, whereas the ones listed as gun ownership were referring to guns on a larger context. The the bibliography was completed on May 30, 2014.

de Souza, Maria de Fátima Marinho, Macinko, J., Alencar, A. P., Malta, D. C., & de Morais Neto, Otaliba Libânio. (2007). Reductions in firearm-related mortality and hospitalizations in Brazil after gun control. *Health Affairs*, 26(2), 575-584.

This paper provides evidence suggesting that gun control measures (gun ownership at large) have been effective in reducing the toll of violence on the Brazilian population. In 2004, for the first time in more than a decade, firearm-related mortality declined 8 percent from the previous year. Firearm-related hospitalizations also reversed a historical trend that year by decreasing 4.6 percent from 2003 levels. These changes corresponded with anti-gun legislation passed in late 2003 and disarmament campaigns undertaken throughout the country since mid-2004. The estimated impact of these measures, if they prove causal, could be as much as 5,563 firearm-related deaths averted in 2004 alone.

Jung, R. S., & Jason, L. A. (1988). Firearm violence and the effects of gun control legislation. *American Journal of Community Psychology*, 16(4), 515-524.

This paper evaluated two gun control laws designed to reduce different types of violent crime. In 1981, East St. Louis, IL, imposed stricter penalties for individuals who carry firearms (gun ownership at large) outside their homes for protection (individuals could keep firearms in their homes). This law had only a temporary impact in reducing firearm use in assaults and robberies. In Evanston, IL, a slightly different approach was taken with legislation that banned specifically handguns in the entire city (i.e., individuals could not keep handguns within their homes). Both cases indicated temporary declines in violent crime as attributed to reductions in gun/handgun ownership.

Kaplan, M. S., & Geling, O. (1998). Firearm suicides and homicides in the United States: Regional variations and patterns of gun ownership. *Social Science & Medicine*, 46(9), 1227-1233.

The present study compares the differential impact of gun availability on firearm suicides and homicides in the U.S. Using data from the NCHS Mortality Detail Files (1989–1991), the 1990 U.S. census population estimates, and the General Social Surveys (1989–1991) for nine geographic divisions, the authors computed rates of firearm and non-firearm suicides and homicides as well as rates of gun ownership for four gender-race groups. The authors tested the strength of the associations between gun availability and firearm suicide and homicide rates. The results show that gun ownership (referring to handguns) has a stronger impact on firearm suicides than homicides. The study suggests that reducing the aggregate level of gun availability may decrease the risk of firearm-related deaths.

Kates, D. B., & Mauser, G. A. (2006). Would banning firearms reduce murder and suicide? A review of international evidence. *Bepress Legal Series*, 1413.

This article examines a broad range of international data that bear on two distinct but interrelated questions: first, whether widespread firearm access is an important contributing factor in murder and/or suicide, and second, whether the introduction of laws that restrict general access to firearms has been successful in reducing violent crime, homicide or suicide: though labeled as firearm(s), the article heavily refers to handguns and handgun ownership throughout the study. The conclusion from the available data is that suicide, murder, and violent crime rates are determined by basic social, economic and/or cultural factors with the availability of handguns and/or any other deadly instruments being irrelevant.

Kellermann, A. L., Rivara, F. P., Rushforth, N. B., Banton, J. G., Reay, D. T., Francisco, J. T., Somes, G. (1993). Gun ownership as a risk factor for homicide in the home. *New England Journal of Medicine*, 329(15), 1084-1091.

It is unknown whether keeping a firearm in the home confers protection against crime or instead, increases the risk of violent crime in the home. To study risk factors for homicide in the home, the authors identified homicides occurring in the homes of victims in three metropolitan counties. During the study period, 1860 homicides occurred in the three counties, 444 of them in the home of the victim. After excluding 24 cases for various reasons, the authors found that the victims more often lived alone or rented their residence. Also, case households more commonly contained an illicit-drug user, a person with prior arrests, or someone who had been hit or hurt in a fight in the home. After controlling for these characteristics, the authors found that keeping a gun (namely, handguns) in the home was strongly and independently associated with an increased risk of homicide. Virtually, all of this risk involved homicide by a family member or intimate acquaintance. In concluding the authors note that the use of illicit drugs and a history of physical fights in the home are important risk factors for homicide in the home; and rather than conferring protection, guns kept in the home are associated with an increase in the risk of homicide by a family member or intimate acquaintance.

Kellermann, A. L., Rivara, F. P., Somes, G., Reay, D. T., Francisco, J., Banton, J. G., Hackman, B. B. (1992). Suicide in the home in relation to gun ownership. *New England Journal of Medicine*, 327(7), 467-472.

It has been suggested that limiting access to firearms could prevent many suicides, but this belief is controversial. To assess the strength of the association between the availability of firearms and suicide, Kellermann et al. studied all suicides that took place in the homes of victims in Shelby County, Tennessee, and King County, Washington, over a 32-month period. During the study period, 803 suicides occurred in the two counties, 565 of which took place in the home of the victim. 326 of these suicides were committed with a firearm – namely, that of a handgun. Analyses revealed that the case subjects were more likely to have lived alone, taken prescribed psychotropic medication, been arrested, abused drugs or alcohol, or not graduated from high school. After controlling for these characteristics, the presence of one or more guns in the home was found to be associated with an increased risk of suicide. In conclusion, the availability of firearms is associated with an increased risk of suicide in the home. Owners of firearms should weigh their reasons for keeping a gun in the home against the possibility that it might someday be used in a suicide.

Killias, M. (1993). International correlations between gun ownership and rates of homicide and suicide. *CMAJ: Canadian Medical Association Journal*, 148(10), 1721.

The objective of this study is to examine international correlations between reported rates of household gun ownership (namely, handgun ownership) and rates of homicide and suicide with a gun. The study collected data from people who responded to a telephone survey conducted by the 1989 International Crime Survey in 11 European countries, Australia, Canada and the United States. Positive correlations were obtained between the rates of household gun ownership and the national rates of homicide and suicide as well as the proportions of homicides and suicides committed with a gun. There was no negative correlation between the rates of ownership and the rates of homicide and suicide committed by other means. Nevertheless, the correlations detected in this study suggest that the presence of a gun in the home increases the likelihood of homicide or suicide.

Killias, M., Van Kesteren, J., & Rindlisbacher, M. (2001). Guns, violent crime, and suicide in 21 countries. *Canadian Journal of Criminology and Criminal Justice*, 43, 429.

Research on the role of firearms (guns at large) in violence and fatal events has focused heavily on American data and research. This research is based on data on gun availability in private households, collected through the international victimization surveys of 1989, 1992, and 1996, and World Health Organization data on homicide and suicide from 21 countries. The results show very strong correlations between the presence of guns in the home and suicide committed with a gun, rates of gun-related homicide involving female victims, and gun-related assault. The picture is different for male homicide, total rates of assault, and generally, for robbery. With the exception of robbery, most correlations are similar or stronger when all types of guns are considered, rather than handguns alone. Interestingly, no significant correlations with total

suicide or homicide rates were found, leaving open the question of possible substitution effects. It is concluded that guns in the home are an important risk factor in suicide with guns, as well as a threat to women (especially female partners), whereas their role in homicide of male victims and street crime (such as robbery) may be much less prominent. Finally, the usual focus on handguns may lead to underestimate the role of other types of guns.

Kleck, G. (1979). Capital punishment, gun ownership, and homicide. *American Journal of Sociology*, 882-910.

This article explores the relationship between deterrence, gun ownership and homicide. Specifically, several issues are examined: (1) the deterrent effect of the death penalty, (2) the relationship between the level of gun ownership and the homicide rate, and (3) the incapacitative effect of imprisonment on the homicide rate. This annotation will focus on the relationship between the level of gun ownership (guns at large) and the homicide rate. Findings consistently show a significant reciprocal relationship between gun ownership levels and the homicide rate, with crime pushing up gun ownership and gun ownership in turn pushing up the homicide rate.

Kleck, G., & Patterson, E. B. (1993). The impact of gun control and gun ownership levels on violence rates. *Journal of Quantitative Criminology*, 9(3), 249-287.

This study attempts to explore the effects, if any, gun control restrictions and gun prevalence have on rates of crime and violence. Data were gathered for all 170 U.S. cities with a population of at least 100,000 in 1980. The models covered all major categories of intentional violence and crime, which frequently involve guns: homicide, suicide, fatal gun accidents, robbery, and aggravated assaults, as well as rape. Findings indicate that (1) gun prevalence levels generally have no net positive effect on total violence rates, (2) homicide, gun assault, and rape rates increase gun prevalence, (3) gun control restrictions have no net effect on gun prevalence levels, and (4) most gun control restrictions generally have no net effect on violence rates. There were, however, some possible exceptions to this last conclusion—of 108 assessments of effects of different gun laws on different types of violence, 7 indicated good support, and another 11 partial support, for the hypothesis of gun control efficacy.

Makarios, M. D., & Pratt, T. C. (2012). The effectiveness of policies and programs that attempt to reduce firearm violence a meta-analysis. *Crime & Delinquency*, 58(2), 222-244.

In response to rising rates of firearms violence that peaked in the mid-1990s, a wide range of policy interventions have been developed in an attempt to reduce violent crimes committed with firearms. Although some of these approaches appear to be effective at reducing gun violence, methodological variations make comparing effects across program evaluations difficult. Accordingly, in this article, the authors use meta-analytic techniques to determine what works in reducing gun violence. Among other findings, the results suggest that handgun bans are effective in reducing gun violence.

Miller, M., Azrael, D., & Hemenway, D. (2002). Household firearm ownership and suicide rates in the United States. *Epidemiology*, *13*(5), 517-524.

In the United States, more people kill themselves with firearms (guns at large) than with all other methods combined. A central question regarding the relation between firearms and suicide is whether the ready availability of firearms increases the suicide rate, rather than merely increasing the proportion of suicides from guns. Miller and Hemenway used publicly available data for the nine regions and 50 states in the United States over a 10-year period (1988–1997) to examine the association between levels of household firearm ownership and rates of suicide, firearm suicide, and non-firearm suicide by age groups and gender. In both regional and state-level analyses, for the U.S. population as a whole, for both males and females, and for virtually every age group, a robust association exists between levels of household firearm ownership (handguns) and suicide rates: where firearm ownership levels are higher, more people die from suicide.

Murray, D. R. (1975). Handguns, gun control laws and firearm violence. *Social Problems*, 81-93.

This paper explores the relationship between access to handguns, gun control laws, and the incidence of violence associated with firearms. Utilizing F.B.I. data, census materials, vital statistics and Harris and Gallup surveys in a multiple regression statistical framework, the study found that gun control laws have no significant effect on rates of violence beyond what can be attributed to background social conditions. This lack of effect may be due to the laws not effectively controlling access to firearms. Finally, differential access to handguns seems to have no effect on rates of violent crime and firearms accidents, another reason why gun control laws are ineffective.

Stolzenberg, L., & D'Alessio, S. J. (2000). Gun availability and violent crime: New evidence from the national incident-based reporting system. *Social Forces*, *78*(4), 1461-1482.

Using four years of county-level data drawn from the National Incident-Based Reporting System (NIBRS) for South Carolina, Stolzenberg et al. investigate whether gun availability is related to violent crime, gun crime, juvenile gun crime, and violent crimes committed with a knife. The authors contribute to the literature by distinguishing between illegal and legal gun availability and by using a comprehensive measure of gun crime. Results show a strong positive relationship between illegal gun availability and violent crime, gun crime, and juvenile gun crime. Little or no effect for the legitimate gun availability measure is observed in any of the models conducted. A supplemental analysis also indicates no evidence of simultaneity between gun availability and violent crime. The strong and consistent effect of illegal rather than legal gun availability on violent crime has important policy implications, because it suggests that greater attention should be directed at devising ways for legitimate gun owners to better secure their weapons.

Villaveces, A., Cummings, P., Espitia, V. E., Koepsell, T. D., McKnight, B., & Kellermann, A. L. (2000). Effect of a ban on carrying firearms on homicide rates in 2 Colombian cities. *Jama*, 283(9), 1205-1209.

Homicide is a leading cause of death in Colombia, with much of the fatal interpersonal violence concentrated in the country's largest cities. Firearms are involved in as much as 80% of homicides in Colombia. This article strives to evaluate the effect of an intermittent police-enforced ban on carrying firearms on the incidence of homicide in urban Colombia. During the study, carrying of firearms (handguns) was banned on weekends after paydays, on holidays, and on election days. Enforcement included establishment of police checkpoints and searching of individuals during traffic stops and other routine law enforcement activity. The incidence of homicide was lower during periods when the firearm-carrying ban was in effect compared with other periods. In conclusion, an intermittent citywide ban on the carrying of firearms in 2 Colombian cities was associated with a reduction in homicide rates for both cities.

CONCLUSIONS

The prevalence of gun violence and the effectiveness of measure to reduce gun violence are geographically and temporally specific. For example, whereas countries such as Norway and Finland have high rates of gun ownership, they have very low rates of homicide in comparison to countries such as the United States. It is quite likely that distinct histories and cultural norms influence how and why firearms are used. The United States, for example, has long protected the right of citizens to bear arms and many American states have laws legitimating the use of guns for self-defence. Such factors must be considered when examining research findings related to the reduction of gun-violence.

Overall, the findings support the banning of civilian handgun ownership by an article count of 10 – 4 in favour of its impact in reducing gun violence: 10 articles argue for the ban being effective in reducing gun violence, whereas 4 argue against the ban for its ineffectiveness. However, the findings indicate that it is the overall availability of guns, rather than the bans themselves, that influence the prevalence of gun violence. Thus, for gun bans to be effective, black market (illegal) firearms must also be eradicated. Furthermore, although the vast majority of the studies primarily focused on gun ownership at large, the mention and/or implications around handguns were both prevalent and pervasive throughout the studies. Said differently, though many of the articles labelled the issue as a general gun ownership problem, examining the articles in its entirety reveal the term “gun” to be synonymous with “handgun” in many of the aforementioned studies. Thus, enhancing and building upon the literature of handgun ownership and its impact on gun violence.

Another observation worth mentioning is the scarcity of scholarly research and peer-reviewed analyses within the key term “handgun ownership” pertaining to gun violence. Due to the difficulty in finding coherent scholarly research pertaining to specifically handguns and its impact on gun violence, studies discussing gun ownership at large were taken and examined. Upon exploring these texts, it was evident that much of the term “gun ownership” meant “handgun ownership,” the broader term of “gun” was used to essentially describe what the ownership of “handguns.” This inability to distinguish the two terms in more refined and specific categories is an issue that future studies should strive to address; for clearer divisions of the type

of gun would specify research endeavours and target the central question of reducing gun violence in more detailed measures.

Regardless of the definitional framework that needs to be revised, the observations from the collected data suggest the following: (1) handgun ownership increases the likelihood of suicide; (2) handgun ownership increases the likelihood of homicide; and (3) handgun ownership can be obtained illegally through illegitimate markets. The first finding is significant in that most of the studies highlighted the use of handguns in committing suicides as a grand problem pertaining to gun violence – namely, harm to one's self. This concept of using handguns to harm one's self is particularly surprising in that many would suspect handgun ownership and gun violence to be linked strictly to homicide rates as opposed to suicide levels. The second finding, with much less than overwhelming numbers, suggests the availability of handguns and guns at large to be a cause of many violent firearm incidents. The third finding brings forth an increasing issue within the topic literature: handguns can be obtained through illegitimate means; thus, negating all possible positives coming from all such legal sanctions restricting the ownership of handguns. This finding thus serves to encourage both current and future studies alike to explore other regions of the issue in discovering alternative solutions to the topic.

BANNING CIVILIAN OWNERSHIP OF SEMI AUTOMATIC GUNS/HIGH CAPACITY MAGAZINES/ASSAULT WEAPONS AND ITS IMPACT ON FIREARM VIOLENCE

This section refers to scholarly materials regarding the impact of banning civilian semi automatic guns/high capacity magazines/assault weapons and its effects on reducing firearm violence in Canada and the United States. The majority of the sources listed are peer-reviewed academic articles. All materials contained within the bibliography are in English, listed in alphabetical order by author and co-author. The databases utilized for this bibliography include: ProQuest, JSTOR, Google Scholar, and Scholars Portal (including Sociological Abstracts, Criminal Justice Abstracts, Criminal Justice Abstracts, and Social Sciences Abstracts). The terms used to search for relevant material include: ban; assault rifles; semi automatic guns; assault weapons; ownership; gun violence; firearm violence.

Chapman, S., Alpers, P., Agho, K., & Jones, M. (2006). Australia's 1996 gun law reforms: Faster falls in firearm deaths, firearm suicides, and a decade without mass shootings. *Injury Prevention, 12*(6), 365-372.

After a 1996 firearm massacre in Tasmania in which 35 people died, Australian governments united to remove semi-automatic and pump-action shotguns and rifles from civilian possession, as a key component of gun law reforms. Observational studies using official statistics were used to determine whether Australia's 1996 major gun law reforms were associated with changes in rates of: mass firearm homicides, total firearm deaths, firearm homicides and firearm suicides, and whether there were any apparent method substitution effects for total homicides and suicides. In the 18 years before the gun law reforms, there were 13 mass shootings in Australia, and none in the 10.5 years afterwards. Declines in firearm-related deaths accelerated after the reforms for total firearm deaths, firearm suicides, and firearm homicides, but not for the smallest category of unintentional firearm deaths, which increased. No evidence of substitution effect for suicides or homicides was observed. The rates of total firearm deaths, firearm homicides and firearm suicides all at least doubled their existing rates of decline after the revised gun laws. Australia's 1996 gun law reforms were followed by more than a decade free of fatal mass shootings, and accelerated declines in firearm deaths, particularly suicides. Total homicide rates followed the same pattern. Removing large numbers of rapid-firing firearms from civilians may be an effective way of reducing mass shootings, firearm homicides and firearm suicides.

Koper, C. S., & Roth, J. A. (2001). The impact of the 1994 federal assault weapon ban on gun violence outcomes: An assessment of multiple outcome measures and some lessons for policy evaluation. *Journal of Quantitative Criminology, 17*(1), 33-74.

The Federal Violent Crime Control and Law Enforcement Act of 1994 bans a group of military-style semiautomatic firearms (i.e., assault weapons) and ammunition magazines capable of holding more than 10 rounds. Ban advocates argue that these weapons are particularly dangerous because they facilitate the rapid firing of high numbers of shots. Though the banned guns and magazines were used in only a modest fraction of gun crimes before the law, it was hypothesized that a decrease in their use might reduce gunshot victimizations, particularly those involving

multiple wounds and/or victims. In response to a Congressional mandate for an impact assessment of the law, this study utilized national and local data sources and a variety of analytical techniques to examine the ban's short-term impact on gun violence. The ban may have contributed to a reduction in gun homicides, but a statistical analysis of our model indicated that any likely impact from the ban would be very difficult to detect statistically for several more years. We found no evidence of reductions in multiple-victim gun homicides or multiple-gunshot wound victimizations. The findings should be treated cautiously due to the methodological difficulties of making a short-term assessment of the ban and because the ban's long-term effects could differ from the short-term impacts revealed by this study.

CONCLUSIONS

Overall, the findings support the banning of civilian ownership of semi automatic guns/high capacity magazines/assault weapons by an article count of 2 - 0 in favour of its impact in reducing gun violence. A major flaw regarding this study was the lack of available data: not much was present regarding semi automatic guns and firearm violence. The majority of the data focused on "gun ownership" at large, and since assault rifles are particular in their force and violent potential, a large sum of articles were removed with the intention of keeping this analysis pure and specific to assault weapons.

Regardless of the lack of data available, some major findings included the following: (1) sanctions and regulations banning ownership of assault weapons have been effective in the past; and (2) banning ownership of assault weapons contribute to a reduction in both gun homicide and suicide levels. The first finding relates specifically to the Australian case study that documented a decrease in gun violence after banning ownership of assault weapons. Though based in Australia, the finding suggests an international precedent that can be deemed valuable for policy makers and others alike to consider. The second finding is equally significant, for it argues that a ban reduces firearm violence. Despite the positive implications of this finding, it must be both documented and understood that longer periods of assessment must be conducted before conclusively stating its long-term effects.

Essentially, with a total count of 2 – 0, this annotation underscores the argument that banning civilian ownership of assault weapons reduces firearm violence. Albeit cognizant of the scarcity of data, the findings suggest greater positives in favour of a ban: at worst, the argument would turn complacent and neutral, not negative.

GUN REGISTRATION AND GUN VIOLENCE

This section contains scholarly and non-scholarly material regarding the effectiveness of gun registration on reducing gun violence. Specifically, the focus of the research material is to identify a correlation between gun registration and gun violence. Importantly, there is the question of whether gun registration should be mandatory for all gun owners. The majority of the listed works are peer-reviewed articles from a variety of academic journals. All materials contained within are in English, listed in alphabetical order by author and co-author. Several databases were utilized in compiling this bibliography, these include: JSTOR, Proquest, EBSCO, and Google Scholar. Additionally, several key terms were used to uncover applicable research material: “registration,” “violence,” “gun,” “Canada,” “firearm,” “availability,” “crime,” and “morality.” It must be noted that the while literature was relatively limited the most up-to-date research data was sought out to better achieve the research goal.

D'Alessio, S. L., & Stolzenberg, L. (2000). Gun Availability and Violent Crime: New Evidence from the National Incident-Based Reporting System. *Social Forces*, 78(4), 1461-1482.

This study investigates whether gun availability is related to violent crime, gun crime, juvenile gun crime, and violent crimes committed with a knife. Furthermore, the study delves into the effects of legal and illegal gun availability, in essence, registered and non-registered firearms. Four-years of county-level data from the National Incident-Based Reporting System for South Carolina and a joint time-series research design were used to collect the necessary data. The results demonstrate a strong positive correlation between illegal gun availability (firearms which are unregistered) and violent crime, gun crime, and juvenile gun crime. However, legitimate gun availability (registered firearms) has little to no observable effect on violent crime, gun crime, and juvenile gun crime. Furthermore, the findings suggest the near absence of a displacement effect. Firearm registration has little influence on violent crimes committed with a knife. In terms of future policy reform, D'Alessio and Stolzenberg suggest greater emphasis be placed on devising methods for the safe storage of registered firearms.

De Souza, M., Alencar, J., Malta D., & Neto, O. (2007). Reductions in Firearm-Related Mortality and Hospitalizations in Brazil After Gun Control. *Health Affairs*, 26(2), 575-584.

This article examines whether current gun control policies, namely gun registration, have reduced gun violence in Brazil. The study used data collected from the Brazilian Ministry of Health's vital statistics system. A linear time-series regression model was used to measure the impact of legislation on firearm mortality. Data on hospitalizations were collected using the Hospital Information System database. The rate for firearm-related hospitalization was calculated for Rio de Janeiro, Sao Paulo, and Espirito Santo. In 2004, firearm-related mortality declined 8 percent for the first time in a decade. Firearm hospitalizations also declined by 4.6 percent from 2003 levels making a reversal of a historic trend. It is estimated that approximately 5,563 deaths were prevented in 2004 due to the impact of the anti-gun legislation passed in late

2003. In the case of Brazil, gun registration has played a significant part in reducing gun violence.

Hepburn, L. M., Vernick, J. S., & Webster, D. W. (2001). Relationship Between Licensing, Registration, and Other Gun Sales Laws and the Source State of Crime Guns. *Injury Prevention, 7*, 184–189.

This article seeks to identify the association between the registration of firearms and gun availability for criminals. This is achieved through the analysis of firearm sales. This study traces data on all crime guns recovered in 27 cities within 23 states that have participated in the federally-funded Youth Crime Gun Interdiction Initiative. In order to study a sizable sample of crime guns that could be effectively traced, only firearms purchased during and after January 1990 were analyzed. Results indicate that in cities with mandatory gun registration and licensing 33.7% of crime guns were first sold by in-state gun dealers in contrast to 72.7% of crime guns in states which had either registration or licensing laws. However, 84.2% of crime guns in US cities without gun registration or licensing were sold by in-state gun dealers. This study indicates that states with gun registration and licensing laws do a better job of keeping guns sold within the state from being recovered in crime scenes. This suggests that gun violence in certain cities is caused by the lack of registration and licensing laws in neighboring cities. This means that reducing gun crime requires the cooperation of numerous cities in simultaneously adopting gun registration policies.

Kleck, G., & Patterson, E. B. (1993). The impact of gun control and gun ownership levels on violence rates. *Journal of Quantitative Criminology, 9*(3), 249-287.

Kleck and Patterson analyze and discuss the effectiveness of several methods of gun control on rates of violence and crime. Data was collected from 170 US cities with a population of at least 100,000 and coded according to state and city-level gun control policies. Several indirect indicators of firearm frequency and models of city violence rates were used. Several violent crime categories involving guns (i.e. homicide, assault, suicide, and rape) were covered by the models. Findings indicate that (1) gun prevalence levels generally have no net positive effect on total violence rates, (2) homicide, gun assault, and rape rates increase gun prevalence, (3) gun control restrictions have no net effect on gun prevalence levels, and (4) most gun control restrictions generally have no net effect on violence rates. Importantly, policies such as waiting periods and gun registration do not appear to reduce gun crime.

Mouzos, J. (2000). The Licensing and Registration Status of Firearms Used In Homicide. *Australian Institute of Criminology, 1-6*.

This study examines the licensing and registration of firearms in Australia and its overall impact on gun-related homicides. Each Australian state and territory has also established an integrated license and firearms registration system, usually maintained by the Firearms Registry branch in each police jurisdiction. The study analyses data compiled by the National Homicide Monitoring

Program at the Australian Institute of Criminology. Additionally, data was collected from state and territory police services through their respective firearm registries. In 1998/99, Australia had 64 firearm homicides, the lowest number since the National Homicide Monitoring Program commenced at the Australian Institute of Criminology a decade ago. On a population basis, this works out at a rate of three firearm homicides per one million people. This is evidence which demonstrates the significance of firearms in homicides. This report finds that since 1997 registered firearms owners were responsible for less than 10 per cent of firearm-related homicides. Most firearms used to commit homicides were not registered and their owners unlicensed. The study suggests that gun registration does play a role in reducing gun violence as those who own registered weapons do not tend to use them to commit crimes.

Stenning, P. C. (2003). Long Gun Registration: A Poorly Aimed Longshot. *Canadian Journal of Criminology and Criminal Justice*, 45(4), 479-488.

This article examines the effectiveness of New Zealand's long gun registration law in reducing crimes where long guns were used. New Zealand introduced universal long gun registration in 1920 and abandoned it in favour of owner licensing in 1983. The study uses several sources for data collection, most notably the New Zealand Health Information Service's Mortality and Demographic data and the Ministry of Agriculture and Forestry's Arm Bill report. Results show that while New Zealand's average annual firearm death rate went up from 2.69 per 100,000 during the 1970s to 2.86 in 1980s, it further declined in the 1990's. This suggests that long gun registration was not a significant factor which influenced the firearm death rate. Furthermore, it seems that the cost surrounding New Zealand's long gun registration program was unjustifiably high. What is most concerning is that there exists no evidence which supports the claim that universal long gun registration can achieve public safety objectives that can be equally achieved by alternative (certainly less costly) measures.

CONCLUSIONS

The majority of research data concerning gun registration comes from the United States. However, data outside the borders of the US is relatively extensive as Canada, Brazil, New Zealand, and Australia are nations with histories of universal gun registration policies. To summarize the overall findings of the research, gun registration is both expensive and may be ineffective in the reduction of gun violence. Importantly (though rather obvious), registering a firearm does not prevent an individual from using the weapon to take a life as the weapon is still in the hands of the individual. Gun registration doesn't change the fact that guns are still available. In fact, gun availability has increased despite strict registration laws.

However, the effectiveness of gun registration in reducing gun violence varies based on where the policy is implemented. In the case of Brazil, gun registration, along with other gun control policies, worked to reduce gun violence. This suggests that regional variations in attitudes towards gun registration may be the result of cultural momentum of sorts. As a result, gun registration policies, must recognize and adhere to regional cultures if they are to be effective in reducing gun violence. Additionally, gun registration demonstrates the "slippery slope" toward eroding personal liberties. Firearm registration has been criticized for its open

abuse of individual privacy and property rights. There exists no evidence which supports the claim that universal gun registration can achieve public safety objectives that cannot be equally achieved by alternative measures that may yield more significant rewards, such as gang and poverty reduction strategies.

BACKGROUND CHECKS AND GUN VIOLENCE

This section contains scholarly and non-scholarly material regarding the effectiveness of background checks in reducing gun violence. Specifically, the focus of the research material is to identify a correlation between background checks and gun violence. Furthermore, there is the question of which background check filter(s) (i.e. mental illness, criminal history, domestic violence, etc.) is/are most effective in reducing gun violence. The majority of the listed works are peer-reviewed articles from a variety of academic journals. All materials contained within are in English, listed in alphabetical order by author and co-author. Several databases were utilized in compiling this bibliography, these include: JSTOR, Proquest, EBSCO, and Google Scholar. Additionally, several key terms were used to uncover applicable research material: “background,” “checks,” “gun,” “violence,” “mental,” “illness,” “criminal,” “history,” and “displacement.” It must be noted that while the literature was reasonably extensive the most up-to-date research data was sought out to better achieve the research goal.

Beaumont, J. J., Drake, C. M., Parham, C. A. Wintemute, G. J., & Wright, M. A., (1998). Prior Misdemeanor Convictions as a Risk Factor for Later Violent and Firearm-Related Criminal Activity Among Authorized Purchasers of Handguns. *The Journal of the American Medical Association*, 280(24), 549-550. 2083-2087.

This article examines whether authorized handgun purchases with prior misdemeanor convictions are more likely than those without a criminal record to be charged with new offenses involving firearms and weapons. Currently, federal law allows for an individual with prior misdemeanor convictions to pass criminal background checks and purchase firearms. A retrospective cohort study was conducted where a total of 5923 handgun purchasers under the age of 50 were randomly selected. Each individual was selected from a computerized registry of licensed firearm dealers in California in 1977. The study revealed that individuals with at least one prior misdemeanor conviction were approximately seven times more likely than those without a prior misdemeanor conviction to be charged with a new firearm-related offense. The study suggests that handgun purchasers with a criminal history are at an increased risk for future criminal activities involving firearms. Furthermore, the study indicates that an individual’s criminal history may be an adequate background search filter for the reduction of gun crimes.

Calvert, J. D., & Kangas, J. L. (2014). Ethical Issues in Mental Health Background Checks for Firearm Ownership. *Professional Psychology: Research and Practice*, 45(1), 76–83.

Calvert and Kangas discuss the proficiency and ethical implications of using mental health as a background check filter. Drawing upon the available literature, the authors suggest that mental illness is not a particularly reliable background check filter as it does not effectively predict gun violence. There are ethical considerations in the implementation of mental health databases for firearm ownership. The patient’s wellbeing may be threatened. The authors further suggest that an individual’s history of violence and current threats of violence are more appropriate predictors of gun violence. Furthermore, national inconsistencies in policies must be resolved while gun

control regulations should include empirically-supported predictors of gun violence.

Cook, P. J. & Ludwig, J. (2000). Homicide and Suicide Rates Associated with Implementation of the Brady Handgun Violence Prevention Act. *American Medical Association*, 284(5), 585-591.

Cook and Ludwig examine whether the Brady Act resulted in the reduction of firearm homicide and suicide. This study used vital statistics from the National Centre for Health Statistics from 1985 to 1997. Specifically, the firearm homicide and firearm suicide rates per 100,000 adults (ages 21 to 55) were calculated by state and year. Additionally, the study controlled for population age, race, poverty and income levels, urban residence, and alcohol consumption in the 32 states affected by the Brady Act and compared it with the 18 states with equivalent legislations. The results suggest that the Brady Act has accounted for the reduction of firearm homicide and suicide rates among those age 55 or older but has not resulted in the reduction of the overall firearm homicide and suicide rates.

Lang, M. (2013). Firearm Background Checks and Suicide. *The Economic Journal*, 123, 1085–1099.

This article investigates the correlation between suicide and guns. Federal firearm background checks for firearm purchases from 1999 to 2007 are used to identify this relationship. Background checks are important as they identify individuals who purchase firearms and use them as a suicide weapon. This study, similar to studies of an analogous nature, reveals that a particular method of suicide can increase the overall suicide rate. The study suggests that the firearm suicide rate will increase exponentially when firearms availability increases. Furthermore, the overall suicide rate increases insignificantly when background checks increase. This is due to the overall availability of firearms and the potential lenience of the rejection criteria.

Mays, G. L., & Ruddell, R. (2005). State Background Checks and Firearms Homicides. *Journal of Criminal Justice*, 33, 127– 136.

Mays and Ruddell examine the relationship between background checks for firearm sales and state firearm homicides. This study utilized ordinary least squares (OLS) regression models to analyze the correlation between firearm homicides and background checks at the state level. Furthermore, the study controlled for economic and social factors (ex: resource deprivation factor and percentage of the state that is black), firearms density, and violent crime. The study found that states with less strict background checks on firearms have greater rates of firearm homicide than states with more stringent background check policies. Additionally, firearm circulation within the United States makes it likely that a motivated individual could conceivably acquire a firearm and use it illegally. Effective state background checks will mitigate this problem.

Panjamapirom, A., & Sen, B. (2012). State Background Checks for Gun Purchase and Firearm Deaths: An exploratory Study. *Preventive Medicine, 55*, 346–350.

Panjamapirom and Sen analyze the types of background checks required by several American states prior to firearm purchases and their relation to the firearm homicide and suicide rates. State-level homicide and suicide data is gathered from 1996-2005 using negative binomial models. The study utilized the Surveys of State Procedures Related to Firearm Sales to retrieve data on the types of background information and WISQARS (Web-based Injury Statistics Query and Reporting System) to gather data on violent death. The findings suggest that more background checks are associated with fewer homicide and suicide deaths. When states employ background checks for mental illness the suicide rate decreases. Firearm homicide rates are lower when states check for restraining orders.

Sorenson, S. B., & Vittes, K. A. (2003). Buying a Handgun for Someone Else: Firearm Willingness to Sell. *Injury Prevention, 9*, 147-150.

This study examines the willingness of firearm dealers to sell handguns to individuals buying for a third party. There is an observable loophole within US gun laws which requires that a background check be conducted for the purchaser of the firearm but not the end user of the firearm. 120 handgun dealers, six from each of the largest US cities, participated in telephone interviews. Dealers were randomly assigned to a male or female interviewer and then randomly assigned to one of three purchase conditions—when the consumer said that the handgun was for him/herself, a gift for a boyfriend or girlfriend, or for a boyfriend or girlfriend “because he or she needs it”. Study demonstrated that most dealers were willing to sell firearms regardless of who ultimately used the gun. The study suggests that firearm dealers have the ability to bypass background check laws, exercising their personal judgment when an individual is explicit on purchasing a firearm for another individual. It is thus required for federal law to amend background check laws to include third parties in gun purchases. This would effectively limit the authority held by firearm dealers to bypass background checks to make a profit.

Vittes, K. A., Vernick, J. S., & Webster, D. W. (2013). Legal Status and Source of Offenders’ Firearms in States with the Least Stringent Criteria for Gun Ownership. *Injury Prevention, 19*, 26-31.

This article examines the relationship between firearm possession and high-risk individuals. Firearm possession by high-risk individuals creates a serious public safety issue. The study uses data from the Survey of Inmates in State Correctional Facilities (2004), a national tally of state prison inmates conducted by the Bureau of the Census for the US Department of Justice. The study analyzed: 1) the ratio of offenders, imprisoned for crimes committed with firearms in 13 states with the least restrictive firearm purchase and possession laws, who would have been prohibited if their states had stricter gun laws; and 2) the source of gun acquisition for offenders who were and were not legally permitted to purchase and possess firearms. The study found that three of ten gun offenders legally possessed firearms but would have been prohibited from possessing or purchasing a firearm in a State with stricter gun laws. However, nearly all

offenders who were legally prohibited acquired their firearm from a source which was not required to conduct a background check. The study suggests that stricter gun ownership laws would have made the acquisition of firearms illegal for inmates who had previously used a firearm to commit a crime. Furthermore, making background checks mandatory for all gun sales would make it more difficult for offenders to obtain guns. This in turn reduces public safety concerns further reducing gun violence.

CONCLUSIONS

Expanding background checks for the purchase of firearms is a practical proposition for a problem which is seemingly unsolvable. There are questions of what background check filters are legally and ethically appropriate yet conducive to the reduction of gun violence. It comes as no surprise that the majority of research data concerning background checks comes from the United States, a nation known for its vehement support for a citizen's right to bear arms. Consequently, data outside the borders of the US is relatively scarce. To summarize the research findings, with the ability to identify potential offenders, background checks, for the most part, are effective in the reduction of gun violence. The research suggests that more background checks are associated with fewer gun-related homicides and suicides. Background check filters, however, is a point of contention. It would appear that background checks which focus on an individual's history of violence and criminal history are most effective in reducing gun violence. For example, an individual's record of restraining orders or history of domestic violence will reduce gun violence as the victim and offender in these instances usually know one another.

However, background checks which focus on an individual's mental health is problematic. There are ethical considerations in the implementation of mental health databases for firearm ownership as a patient's wellbeing and privacy may be threatened. However, the research suggests that when states employ background checks for mental illness the suicide rate decreases. Individuals who commit suicide or massacre droves of innocents using firearms often possess a mental illness. It is thus vital to identify these individuals during background checks and address their volatility before serious harm can be done. Aside from background check filters there is the issue of who administers the background checks. The research suggests that firearm dealers have the ability to bypass background check laws, exercising their personal judgment on who can and cannot purchase a firearm. It is thus necessary for governments to amend background check laws to make the state the sole judge of gun ownership

THE EFFECTIVENESS OF CONCEALED-CARRY GUN LAWS IN GUN VIOLENCE REDUCTION

The aim of this section is to convey the effect that concealed-carry gun laws have on gun violence. An array of material were gathered with the intention of determining whether or not laws that grants citizens the right to carry a firearm for defensive purposes reduces gun violence, in turn determining if such laws should be abolished. When creating this bibliography, the search databases that were used to locate academic sources included EBSCO, Google Scholar, ProQuest, as well as University of Toronto Summons. The terms used to search for relevant material include: concealed carry, laws, guns, crime, violen*, firearms, and deterrence. Incorporated in this bibliography are peer-reviewed scholarly journal articles in English, of which, are Canadian and internationally published and are listed in alphabetical order according to the authors' names. The bibliography was completed on May 30th 2014.

Black, D. A., & Nagin, D. S. (1998). Do right-to-carry laws deter violent crime? *Journal of Legal Studies*, 27(1), 209-219.

This study tests the Lott and Mustard (1997) conclusion that right-to-carry laws deter violent crime. Black and Nagin reanalyze 18 states in the U.S that have enacted concealed-carry laws. Their reanalysis of Lott and Mustard's data provides no basis for drawing confident conclusions about the impact of right-to-carry laws on violent crime. They find that their results are highly sensitive to small changes in their model and sample. Without Florida in the sample, there is no detectable impact of right-to-carry laws on the rate of murder and rape, the two crimes that by the calculations of Lou and Mustard account for 80 percent of the social benefit of right-to-carry laws. A more general model based on year-to-year differences yields no evidence of significant impact for any type of violent crime. As a result, inference based on the Lott and Mustard model is inappropriate, and their results cannot be used responsibly to formulate public policy.

Branas, C. C., Richmond, Therese S, CRNP, Culhane, D. P., Have, Thomas R Ten & Wiebe, D. J. (2009). Investigating the link between gun possession and gun assault. *American Journal of Public Health*, 99(11), 2034-40.

Branas et al.'s paper investigates the relationship between being either injuriously or fatally shot in an assault and gun possession. The authors conduct a case control study of 677 case participants and 684 population based participants, all of whom were aged 21 years and older, that were shot at in an assault in Philadelphia, Pennsylvania between 2003 and 2006. Branass et al. put forth a conceptual framework that argues the likelihood of carrying a firearm is affected by individual and situational characteristics that generally take the form of a desire for self-protection. Consequently however, a false sense of empowerment creates overreaction among possessors, the risk of gun assaults increases as these individuals are more likely to enter dangerous neighbourhoods, and guns become increasingly carried to conflicts which can be taken and turned on them. These plausible mechanisms are argued by the authors to account for the finding that those who possess guns on average have a significantly greater risk of being both fatally and injuriously shot in an assault. The authors conclude by showing the possession of a

firearm in urban areas to not act as a defensive mechanism against dangerous environments; rather, conversely, gun violence has been shown to increase a result of such possession.

Bronars, S. G., & Lott, J. R. Jr. (1998). Criminal deterrence, geographic spillovers, and the right to carry concealed handguns. *The American Economic Review*, 88(2), 475-479.

Bronars and Lott's (1998) study examines the effect that the enactment of shall-issue concealed-firearms legislation within one state has on the crime rates in neighbouring states. Through use of annual cross-section time-series county-level crime data for the continental US between 1977 to 1992, obtained from the Federal Bureau of Investigation Uniform Crime Report, the authors measure murder, rape, and robbery rate fluctuations within jurisdictions as a result of concealed-carry laws. Bronars and Lott find that jurisdictions which guarantee a citizen who meets certain objective criteria the right to carry a gun cause spillover effects in crime rates among jurisdictions within a fifty mile radius. The major forms of violent and property crime are shown to increase significantly immediately, increasing over time, within neighbouring jurisdictions, while significantly lessening within the jurisdictions that enacted the concealed-firearm carry laws. The authors conclude by arguing that criminals are deterred by concealed handguns, subsequently relocating their criminal behaviour to areas that do not have concealed-carry laws enacted. In order to experience the largest reduction in violent crime, it is argued that all states should adopt concealed-firearm carry laws.

Dezhbakhsh, H., & Rubin, P. H. (1998). Lives saved or lives lost? The effects of concealed-handgun laws on crime. *The American Economic Review*, 88(2), 468-474.

Dezhbakhsh and Rubin's (1998) study examines the effect of permissive concealed-handgun laws on crime using a regression-based model that shows changes in behavioural parameters and population characteristics. With the aim of overcoming the shortcomings in Lott and Mustard's (1997) work, the authors rely upon their violent crime data set of 3054 U.S counties between 1982 and 1992 acquired through the Federal Bureau of Investigation, while also taking into consideration heterogeneity in crime rates among counties. The authors find insignificant reductions in violent crime alongside a significant increase in property crime within counties that enacted concealed-carry laws. Further, when Dezhbakhsh and Rubin study the change in crime rates in relation to demographic and economic variables, the enactment of concealed carry laws are shown to be most effective in reducing crime among both elderly and young nonblack females, of whom must reside in jurisdictions that that spend relatively high amounts of money on policing while having relatively low arrest rates. The authors conclude by arguing that concealed-carry laws have a much smaller impact on crime than previous studies have suggested, and where correlations are found, they are not always negative. Whether or not concealed-carry laws are effective in reducing violent crime is argued to rely largely upon state spending and population characteristics.

Duwe, G., Kovandzic, T., & Moody, C. (2002). The impact of right-to-carry concealed firearm laws on mass public shootings. *Homicide Studies*, 6(4), 271-296.

Duwe et al. hypothesize that gun violence, specifically mass public shootings involving at least 4 victims, would increase as concealed carry laws were passed among states. After analyzing the effects of twenty-five right-to-carry laws using state panel data on mass public shootings between 1977 and 1999, they find that the incidence, mortality, and injury rate are not significantly affected after this law's enactment. Noting that the majority of gun carriers are without permits, the authors argue that the introduction of concealed carry laws do not affect carrying or the costs to prospective shooters. The article concludes by using the Poisson regression model data to argue that increasing the availability of guns by means of concealed carry permits has no effect on mass public shootings when considered across rather than within individual states.

Gau, J. M. (2008). A neighborhood-level analysis of concealed hand-gun permits. *Policing*, 31(4), 674-693.

Gau's (2008) study seeks to provide an explanatory framework that takes into account the recent increase in violent crime in jurisdictions that require concealed-pistol licensing. Gau examines the effect that trust in police, social cohesion, and fear of crime has on neighborhood-level rates of concealed pistol license holding and in turn violent crime. The study focuses on neighbourhood-level data from a city survey and the state Department of Licensing. Gau finds that the level of police service had a negative indirect effect on legal firearm carrying rates due to its suppression on the fear of crime. Conversely, social cohesion is found to have a significantly positive direct effect on concealed pistol carrying rates. Gau goes on to argue that while people in socially cohesive areas are more likely to trust in the police while having lower levels of fear in regards to crime, they are more likely to carry concealed weapons due to altruism and desires for maintaining safety. Gau concludes with discussion on empirical evidence showing higher carrying prevalence within neighbourhoods to lessen criminal deterrence while increasing the rate of violent crime and accidental firearm injuries. It is argued that the introduction of concealed-carry permit laws increase the amount of firearm carriers and subsequently the violent crime rate in even the more affluent neighbourhoods, and thus the police should be sure that citizens in these neighborhoods have ready access to safety training and devices to counteract such increases.

Ginwalla, R., Rhee, P., Friese, R., Green, D. J., Gries, L., Joseph, B., et al. (2014) Repeal of the concealed weapons law and its impact on gun-related injuries and deaths. *The journal of trauma and acute care surgery*. 76 (3) p. 569.

Ginwalla et al. conducted two twenty-four month retrospective cohort studies between August of 2008 and July of 2012 in South Arizona to test their hypothesis of concealed carry permits increasing gun related injuries and fatalities. Through use of the National Instant Criminal Background Check System, the Pima County Medical Examiner's Office, as well as the University of Arizona Medical Centers trauma registry, Ginwalla et al. collected injury, death,

gun sales and criminal activity data both before and after the legislation was passed. The authors find an increase in firearm purchases coincident with injuries and deaths by means of such firearms. While violent crime remained nearly the same after the introduction of concealed carry permits, the probability of those that are involved in such crimes being killed or injured by a firearm increased significantly. The paper thus concludes by implicating that as states implement concealed carry permits, the rate of gun violence will increase as a result of guns becoming more available on the streets to conceal as well as being more relied upon when engaged in violent crime.

Kleck, G., & Gertz, M. (1998). Carrying guns for protection: Results from the national self-defense survey. *Journal of Research in Crime and Delinquency*, 35(2), 193-224.

Gertz and Kleck expand upon national findings from previous research pertaining to the effects that carrying a firearm among juveniles as well as those with a conceal carry permit have on the United States' crime rate by analyzing the adult minority population, the majority of whom are found to carry a firearm. The authors instructed a polling firm to conduct anonymous interviews in forty-eight states with individuals aged eighteen and older in 1993 (N=1832). While the authors find the majority of gun carriers to more likely have been a prior victim of a crime, finding also a mere fraction of gun carrying instances leading to violent offences or further victimization, Gertz and Kleck argue that these individuals carry a gun mainly for self-defence purposes, in turn ruling out vengeance and vigilantes that would otherwise lead to offending. In turn, the authors argue that the propensity to commit a violent offense involving a gun does not increase as a result of conceal carrying. Taken together, the paper shows conceal carry permits to act as a criminal deterrent while downplaying the enticement of criminal behaviour due to the goal of self-protection. The paper concludes in arguing that the enactment of carry permits decreases gun violence by allowing law enforcement to focus more on individuals more likely to use them to commit violent offences as opposed to those who carry it for self-protection who are shown to have low violent crime rates.

Kovandzic, T. V., & Marvell, T. B. (2003). Right-to-carry concealed handguns and violent crime: Crime control through gun decontrol?. *Criminology & Public Policy*, 2(3), 363-396.

Kovandzic and Marvell's (2003) paper puts forth the argument that while a growing number of jurisdictions continue to enact right-to-carry laws, major forms of violent crime will remain unchanged. The authors explain their position by first noting that the majority of individuals carry guns without a permit due to the barriers involved in attaining permits; therefore, the introduction of right-to-carry laws would not significantly change their original behaviour. Second, if guns among criminals increase the violent crime rate, it would be balanced out by the majority of holders that are noncriminal. Finally, the majority of individuals who attain gun permits are middle income earners and reside in safe areas, meaning concealed carry permits would be unlikely to have a significant impact on the gun violence rate. In all, although the majority of violent crime is shown to be committed through the use of a firearm, the authors use previous research to hypothesize that all forms of violent crime will not be significantly affected by the introduction of carry laws. This hypothesis is tested through use of panel data for 58

Florida counties between 1980 and 2000. This study measures crime during this period using data from the Uniform Crime Report index, the Federal Bureau Investigation, and Centers of Disease Control and Prevention part III Mortality Detail Files. After controlling for the economic, age structure, and prison population variables in their analysis, the authors conclude with findings that support their hypothesis of no increase or reduction in major forms of violent crime as a result of the introduction of right-to-carry laws.

Kovandzic, T., Marvell, T., & Vieraitis, L. (2005). The impact of "Shall-issue" concealed handgun laws on violent crime rates. *Homicide Studies*, 9(4), 292-323.

Kovandzic et al. use panel data gained from Uniform Crime Reports for all U.S. cities with a 1990 population of at least 100,000 between 1980 and 2000, of which totaled 189 cities, in order to examine the impact of shall-issue concealed handgun laws have on violent crime rates. The authors measure the effects of these laws using a time-trend variable for the number of years after the law has been in effect. Kovandzic et al. find that the enactment of concealed-carry laws is not shown to significantly reduce or increase rates of violent crime within jurisdictions. The paper concludes by arguing that since 1% of the adult population have concealed-carry permits in jurisdictions that require them, their behaviour is unlikely to change as a result of laws that require permits to carry firearms. While the possession of firearms is argued to lessen the likelihood of experiencing gun related injuries, this deterrence occurs independently of shall issue concealed-carry laws.

Lott, John R. Jr, & Mustard, D. B. (1997). Crime, deterrence, and right-to-carry concealed handguns. *Journal of Legal Studies*, 26(1), 1-68.

Using cross-sectional time-series data for U.S. counties from 1977 to 1992, Lott and Mustard find that allowing citizens to carry concealed weapons deters violent crimes, without increasing accidental deaths. If those states without right-to-carry concealed gun provisions had adopted them in 1992, county- and state-level data is argued to have indicated that approximately 1,500 murders would have been avoided yearly. Similarly, the authors predict that rapes would have declined by over 4,000, robbery by over 11,000, and aggravated assaults by over 60,000. They also find that criminals substitute stealth into crime, where the probability of contact between the criminal and the victim is minimal, thus increasing well thought out property crime. Further, independent of concealed-carry laws, higher arrest and conviction rates are also shown to consistently reduce crime due to potential offenders being deterred from committing violent crime.

Ludwig, J. (1998). Concealed-gun-carrying laws and violent crime: Evidence from state panel data. *International Review of Law and Economics*, 18(3), 239-254.

Ludwig (1998) examines the effect of concealed firearm carry laws being enacted within U.S jurisdictions on crime rates. Focusing on fifty states between 1977 and 1994, Ludwig analyzes the homicide and victimization rates among juveniles aged 12 to 17 and adults aged 21 and older

compiled by the U.S Department of Health and Human Services. Due to juveniles being ineligible for concealed-carry permits on the grounds of age restrictions, Ludwig hypothesizes that any deterrent benefits that would be experienced as a result of these laws would be concentrated within the 21 and older age cohort; subsequently, victimization rate differences between juveniles and adults should experience greater convergence after the passing of concealed-carry laws. Using a regression model of analysis, the paper puts forth findings that are not in support of this hypothesis by showing a slight (1.4%) nationwide increase in the adult homicide rate rather than lesser differences in juvenile and adult victimization rates when concealed-carry laws are enacted. While this is shown as a general trend across states, the paper also shows findings that support state heterogeneity, showing declines in Florida and Georgia homicide rates and greater convergences in juvenile-adult victimization rates. Ludwig concludes by challenging the findings of studies that fail to control for time-varying state variables such as age requirements and accounting for the heterogeneity of states when enacting laws. Due to such unreliability and state differences, it is argued that the thought of reducing violent crime should not explain state and federal legislators support for concealed-carry laws.

Rubin, P. H., & Dezhbakhsh, H. (2003). The effect of concealed handgun laws on crime: Beyond the dummy variables. *International Review of Law and Economics*, 23(2), 199-216.

Dezhbakhsh and Rubin's (2003) study makes use of Lott and Mustards (1997) data set of 2054 counties between 1977 and 1992 containing Federal Bureau Investigation's Uniform Crime Reports of violent and property crime rates as well as county level economic and social characteristics. The authors hypothesize that of the counties studied, those that enacted concealed handgun carry laws would experience heterogeneous changes in crime rates due to influences other than the law itself. The paper puts forth findings that support the authors' hypothesis, showing that the enactment of concealed handgun carry laws significantly reduce major forms of crime, including murder, assault, and robbery, only when arrest rates and police spending are shown to be relatively high. The overall trend however, shows concealed handgun carry law effects to be insignificant and more mixed, showing not to be crime-reducing in most cases. The authors conclude with the policy implication that economic and demographic factors are integral to the reduction of violent and property crime within jurisdictions, more so than simply passing concealed handgun carry permit legislation.

CONCLUSIONS ON THE EFFECTIVENESS OF CONCEALED-CARRY LAWS

Studies focused on the impact that concealed-carry laws have on the rate of violent gun crime comes largely from the United States. A voluminous amount of material is focused on the U.S due to it being one of the first countries to enact such laws while also being in the presence of both the largest number of firearms as well as firearm related injury and mortality. This annotated bibliography examined such material, concluding that the majority of jurisdictions that enact laws allowing citizens to carry concealed weapons for the purpose of self defense experience neither a statistically significant increase nor decrease in the rate of gun violence. The majority of concealed-carry permit holders have been found to be middle aged, from the middle class, as well as nonviolent. In order for concealed-carry laws to reduce gun violence, they would

need to reduce the number of illegal, and more violent, firearm carriers. Conversely however, only 1% of concealed firearm carriers have permits (Kovandzic, 2005), with the majority of individuals carrying concealed weapons without permits even when required by the law. Simply enacting concealed-carry laws is shown to not significantly affect carrying behaviour, the amount of carriers, nor the violent gun crime rate within jurisdictions. This occurrence of concealed-carry laws having no significant effect on gun violence however, is shown in the aggregation of the selected material; when taken individually, states experience heterogeneous effects due to population characteristics, law enactment and state spending.

Several studies show decreases in firearm related murders, assaults, and robberies within jurisdictions that have high police spending and arrest rates when concealed-carry laws are enacted. More attention can be given to the violent subpopulation of firearm carriers while deterring potential offenders. Such an occurrence is seen in Florida and Georgia, which account for much of the decline in gun violence. On the other end of the spectrum, several studies show increases in firearm related homicide, assaults, and robberies as a result of concealed-carry laws. A counterintuitive finding shows that within more affluent socially cohesive neighbourhoods, a greater percentage of residents are more likely to carry firearms in order to maintain safety and portray altruism. As a result, although these residents are less violent, gun violence is shown to increase as a result of a greater prevalence of guns and determination to maintain safety.

While states show heterogeneous effects of concealed-carry laws on gun violence due to the varying population characteristics and police spending, when economic, age-structure, and prison population are controlled for, the overall impact of these laws shows no significant change in gun violence. Without concealed-carry laws drastically affecting individuals' violent nature or the prevalence of guns, the rates of violence involving firearms will not be significantly affected. Further, due to geographical spillover, while violent gun crime can be shown to decline in one area in the presence of the abovementioned population characteristics, potential criminals subsequently relocating their crime to neighbouring areas even when deterred, balances out this decline. In short, in the presence of relatively high police spending, GDP, and arrest rates, a decline in gun violence is shown to occur, however, when these variables are controlled for, or when jurisdictions are aggregated, such effects become statistically insignificant. Overall, concealed-carry laws do not significantly affect the rate of gun violence.

THE EFFECTIVENESS OF SAFE STORAGE GUN LAWS IN THE REDUCTION OF GUN VIOLENCE

The aim of this research is to study the effect that safe storage gun laws has on gun violence. Such laws require individuals to safely store their firearms locked and unloaded. Specifically, this research sought evidence to support or refute whether or not safe storage laws reduce gun violence, and in turn, if they should be abolished. The creation of this bibliography relied upon the search databases including EBSCO, Google Scholar, ProQuest, as well as University of Toronto Summons. The terms used to search for relevant scholarly sources include: safe storage; laws, guns, crime, violence*, and child access prevention. The bibliography is composed of peer-reviewed scholarly journal articles that are both Canadian and internationally published and are listed in alphabetical order by author name. Material was chosen based on relevance to the topic without the limitation of meeting specific date criteria. This bibliography was completed on May 30th 2014.

Bridges, F. S. (2004). Gun control law (Bill C-17), suicide, and homicide in Canada. *Psychological Reports, 94*(3 Pt 1), 819-826.

Canadian Bill C-17 was implemented in 1991 to restrict the access of firearms by requiring safe storage, providing a chance to investigate the effect of firearm control laws on the use of such firearms in the acts of suicide and homicide. Using Federal Government data, Bridges studies the use of firearms for suicide and homicide in Canada between 1984 and 1990, seven years prior to Bill C-17, and 1992 to 1998, the period after the passing of the bill. Bridges finds a significant decrease after enactment of Bill C-17 in the rates of suicides and homicides involving firearms. The paper's analysis provides support for the position that restricting the availability of firearms as a lethal means of committing suicide and homicide helps reduce the numbers of firearm related suicides and homicides.

Caron, J. (2004). Gun control and suicide: Possible impact of Canadian legislation to ensure safe storage of firearms. *Archives of Suicide Research, 8*(4), 361-37

Caron's (2004) study seeks to test the availability and substitution hypotheses, arguing that the introduction of safe firearm storage laws limit access to firearms which subsequently decreases gun violence while increasing other forms of violence to satisfy intentions. Caron tests these hypotheses by comparing 426 suicide cases including rates and methods in Northern Quebec six years before the enactment of safe storage laws to five years after it. In support of his hypotheses, Caron finds firearm suicide rates to significantly decline for both men and women after the introduction of safe storage laws. Further, alternative methods of suicide, including hanging and poisoning are shown to significantly increase after the enactment of such laws. This trend is shown to be more prominent among females that are aged 25 and under, decreasing in magnitude and ultimately leading to unchanged suicide rates and methods for the 45 and older age cohort. Although the effect is more prominent among female youth due to older men more likely to have access to locked firearm storage areas, while overall suicide rates are slightly

increasing due to alternative methods, the paper concludes by supporting the enactment of safe storage laws. Caron argues that a certain number of suicides are shown to be prevented as a result of safe storage laws.

Caron, J., Julien, M., & Huang, J. H. (2008). Changes in suicide methods in Quebec between 1987 and 2000: The possible impact of bill C-17 requiring safe storage of firearms. *Suicide & Life - Threatening Behavior*, 38(2), 195-208.

Caron et al.'s (2008) study shows changes in both the overall and firearm suicide rates with Québec before and after the enactment of Bill C-17, which was implemented to secure safe storage of firearms. Their study examines 20,009 suicide cases reported to the coroner's office while using a time series analysis to compare suicide rates during the two periods. The authors find that while firearm suicide rates have dropped among males and females after the introduction of Bill C-17, the decline was insignificant. The decline in suicide rates involving firearms has not resulted in a parallel decline in overall suicide rates, in fact, methods such as hanging have increased after the passage of this bill. Further, the findings show that Bill C-17 neither improved the downward trend in firearm suicide, which had already begun before the enactment of the law, nor reduced the upward trend of the overall suicide rate. The authors conclude by arguing that while laws that restrict access to firearms, in this case safe storage laws, lead to a decline in firearm suicides, such a decline is insignificant and does not affect overall suicide rates.

Cummings, P., Grossman, D. C., Rivara, F. P., & Koepsell, T. D. (1997). State gun safe storage laws and child mortality due to firearms. *The Journal of the American Medical Association*, 278(13), 1084-1086.

Cummings et al.'s (1997) study aims to determine if state laws that require safe storage of firearms are associated with a reduction in child mortality due to firearms. The study focuses on the rates of unintentional deaths, suicides, and homicides, all due to firearms, among children aged 0 through 15 in all fifty states and the District of Columbia between 1979 and 1994. The authors find that among the states that enacted safe storage laws for at least 1 year, unintentional shootings were significantly reduced (23%) while gun-related homicides and suicides also showed modest declines, yet were not statistically significant. The paper concludes with the argument that safe storage laws intended to make firearms less accessible to children prevents unintentional shooting deaths among children younger than 15 years.

DeSimone, J., Markowitz, S., & Xu, J. (July 2013). Child access prevention laws and nonfatal gun injuries. *Southern Economic Journal*, 80(1), 5-25.

DeSimone et al.'s (2013) study the effect that Child Access Prevention (CAP) laws that require owners to safely store their firearms locked and unloaded have on the rate of child and adolescent nonfatal firearm injuries. Using annual hospital discharge data the authors investigate whether CAP laws are associated with a decrease in nonfatal gun injuries within states that have

enacted this legislation. Results from Poisson regressions that control for various hospital, county, and state characteristics, including state-specific fixed effects and time trends, indicate that child access prevention laws that require the safe storage of firearms are associated with statistically significant reductions in nonfatal gun injuries among children under the age of 18.

Hardy, M. S. (2006). Keeping children safe around guns: Pitfalls and promises. *Aggression and Violent Behavior, 11*(4), 352-366.

Hardy's (2006) study examines the effect that safe firearm storage laws have on adolescent and children firearm injuries and deaths. Hardy notes that the risk of homicide, suicide, unintentional deaths and injuries is greater when a firearm is present, particularly when the firearm is stored unsafely. He notes in his analysis that prevention efforts such as community-based education, media campaigns, access prevention laws, and physician-based counseling appear to not have a significant impact on the gun ownership and safe storage practices of parents. Further, Hardy argues that young children lack the cognitive maturity to generalize lessons learned in the classroom to the real world of their homes and play areas. Older children and adolescents are shown to believe themselves as invulnerable to injury and are easily persuaded by their peers to act in defiant and reckless ways. The interventions themselves are rarely based on sound behavioral principles, lack adequate evaluation criteria, and may promote a gun-carrying norm. Hardy concludes by arguing that the abovementioned prevention efforts have no significant effect on firearm related injuries and deaths among adolescents and children.

Hepburn, L., Azrael, D., Miller, M., & Hemenway, D. (2006). The effect of child access prevention laws on unintentional child firearm fatalities, 1979-2000. *The Journal of Trauma, 61*(2), 423-428.

Hemenway, Hepburn, and Miller's (2000) paper puts forth the hypothesis that unintentional firearm fatality rates among children aged fourteen and under will decline more significantly in states that enact child access prevention laws than those that do not. The authors argue that the punishment which would ensue if firearms are not stored safely unloaded and locked in the presence of children, effects behaviour and subsequently lessens firearm access to children. The authors go on to further hypothesize that those aged 55-74 have an unintentional firearm mortality rate that is less influenced due to the lower likelihood of having children residing in the household. Through use of pooled cross-sectional time-series data between 1979 and 2000 for fifty states in the US coupled with a binomial regression model, the authors find that the seventeen states enacting child access prevention laws experienced a greater decline in unintentional firearm child fatalities. Further, in support of their second hypothesis, the firearm mortality rate among the 55-74 age cohort was shown not be significantly affected among these states. When the authors go on to find that the majority of the decline is attributable to Florida and California however, they conclude that while child access prevention laws are shown to have some influence on the decline of firearm fatalities, factors such as felony prosecution, the publicity of legislation, and declining rates of males and children in households, account for much of this decline among states.

R. Lott, J. Jr., & E. Whitley, J. (2001). Safe-Storage gun laws: Accidental deaths, suicides, and crime. *Journal of Law and Economics*, 44, 659-689.

Lott and Whitley observe the impact the implementation of safe storage policies has on fifteen states in the United States in their (2001) study. Challenging the congressional notion that safe storage laws reduce the rates of accidental deaths and suicides by means of a firearm as well as crime in general, Lott and Whitley find contrarily that the former is unaffected while the latter increases annually. Finding that those who commit accidental shootings are less likely to abide by the law while making note of the high cost of gun trigger locks, the authors argue that the introduction of safe storage laws among the fifteen states have no impact on such individuals' behaviour. Further, they find that unlike their counterparts, among the fifteen states that enacted the safe storage laws, murder, rape, and robbery, rates increased and did so at a greater rate the longer such laws were enacted. While finding safe storage laws to have no statistically significant impact on accidental shootings and suicides by firearms, the violent crime rate is shown to increase and be correlated with community deterioration and fear, acting as an indication of an increase in gun violence. The authors conclude with the finding that the longer safe storage laws are enacted, the more likely firearms will be stored safely, increasing victimization due to the lessening of criminal deterrence; those who store guns unloaded and locked are shown to be more likely victimized, explaining the increasing violent crime rate.

Sarma, K. (2008). Responding to firearms assisted suicide in Ireland: A review of core concerns and lessons from abroad. *The Irish Journal of Psychology*, 29(3-4), 243-253.

Studying the rise in firearms assisted suicides in Ireland between 1980 and 2004, Sarma studies neighbouring jurisdictions that have similarly enacted safe storage laws yet experience declines in firearm related deaths and injuries. This paper provides a review of legislative, policing, and clinical issues surrounding the ownership of firearms by those at risk of self-harming behaviour and suicide. Through analysis on Australia, Sarma finds that gun-incident prevention, gained through state-wide educational programs on gun safety, and screening of the psychologically ill from obtaining firearms, are necessary alongside safe storage laws in order to reduce firearm related deaths and injuries. Only enacting legislation that requires individuals to safely store their firearms without specification in regards to how and where to store it, nor adequate state funding, is argued by Sarma to be ineffective in reducing firearm related deaths and injuries, as shown in the case of Ireland.

Webster, D. W., & Starnes, M. (2000). Reexamining the association between child access prevention gun laws and unintentional shooting deaths of children. *Pediatrics*, 106(6), 1466-1469.

Webster and Starnes conduct a pooled time series study of unintentional firearm deaths among children under the age of fifteen between 1979 and 1997 across fifteen American states as well as the District of Columbia. The authors conduct this study with the intention to understand what effect laws requiring firearms to be stored unloaded and securely locked being enacted have

on intentional and unintentional child shooting. State aggregated results from their study support their hypothesis that states which enact safe storage laws see a decline in unintentional child mortality rates as a result of a firearm. However, when states are analyzed individually, the authors find no significant change in such rates except for Florida. The authors go further as to argue jurisdictions that have higher news coverage on the enacted safe storage laws, have tougher punishments for disobeying these laws, and indicate previous downward crime trends, all of which were present within Florida during the time of the study, account for a decline in child and adolescent shootings. The article concludes with the policy implication that jurisdictions must go beyond enacting safe storage laws by providing effective long-term education, modify guns themselves so unauthorized users cannot operate them, and maintaining a prosecution as a felony rather than a misdemeanor penalty as punishment; without this multifaceted approach, child and adolescent shootings are argued to be unaffected by the introduction of safe storage laws.

Webster, D. W., Vernick, J. S., Zeoli, A. M., & Manganello, J. A. (2004). Association between youth-focused firearm laws and youth suicides. *JAMA: The Journal of the American Medical Association*, 292(5), 594-601.

Webster et al. seek to evaluate the association between youth-focused firearm laws, including minimum age requirements for handgun purchasing and possession as well as child access prevention laws that require firearm safe storage, and rates of firearm related suicide among youth in their (2004) study. The authors conduct a quasi-experiment with annual state-level data on suicide rates among U.S youths aged 14 through 20 years (N=63, 954) between 1976 and 2001. The authors find that the introduction of minimum age requirements for firearm purchases and possession laws had no statistically significant reduction in suicide rates among the sample population. Child access prevention laws that require the safe storage of firearms however, showed modest reductions in overall suicide rates, with statistically significant reductions in those that involved the use of firearms.

CONCLUSIONS ON THE EFFECTIVENESS OF SAFE STORAGE GUN LAWS

Jurisdictions that attempt to reduce gun violence by legislating laws which require citizens to safely store their guns locked and unloaded are shown to be successful only in as much as they invest resources in accompaniment with these laws. While connections are drawn between statistically significant reductions in violent crime and firearms being safely stored across studies, safe storage laws are not shown to significantly affect storing behaviour itself. Laws being enacted that require firearm safe storage are not shown to address the desire for protection, ease of access, and sufficient amount of knowledge and materials pertaining to safe gun storage.

The majority of studies presented that were conducted in Australia, Canada, and the United States, show safe storage laws enacted in various ways and subsequently reaping varying degrees of effectiveness in regards to the reduction of gun violence. The studies show that among the jurisdictions that not only require firearms to be safely stored, but also enforce severe sanctions, such as Florida, Connecticut and California's felony prosecutions, firearm related

suicides, homicides, and accidental deaths significantly declines. Further, as seen in Australia, when the safe storage laws gain publicity and educational gun storage programs are implemented, a greater number of individuals are aware of safe gun storage policies as well as how they should be safely stored. Finally, Lott's (2001) study shows that state spending should be allocated towards gun locks to significantly reduce firearm related violence. The three abovementioned interventions are shown to significantly increase safe storage practices within states and countries, in turn reducing unauthorized accessibility to loaded firearms, of which significantly lessens firearm related suicides, homicides, as well as accidental injury and death.

The majority of jurisdictions experience either modest declines or insignificant changes in gun violence when the abovementioned interventions are absent from safe storage laws. A few of the studies of crime prone areas however, show increases in both gun and alternative forms of violence as a result of these laws. As more individuals begin to safely store their firearms, victimization is shown by Lott (2001) to increase as criminal deterrence lessens due to the decline in armed potential targets. Caron and colleagues (2008) show that safe storage laws had no significant effect in reducing firearm related suicides in the province of Quebec. Furthermore, adolescents and children who would otherwise have committed suicide by way of a firearm, switch to alternative methods such as hanging or poisoning, in other words their inclination towards self-harm was not eradicated simply by safe storage laws (see Caron, 2004). Nonetheless, when aggregated, the studies examined show that the introduction of safe storage laws has insignificant changes in gun storage behaviour and subsequently gun violence. When enacted with interventions that target storage behaviour however, such as the abovementioned state funding for gun locks, educational safe storage programs, and law publicity, safe storage laws are shown to be effective in significantly reducing gun violence.

THE IMPLEMENTATION OF ANTI-GANG PROGRAMS FOR AT-RISK YOUTH AND ITS EFFECT ON GUN VIOLENCE

This section refers to both scholarly and non-scholarly materials regarding the implementation of intensive anti-gang initiatives in Canada, the United States and the UK, and discusses its potential effects on the problem of youth gun violence. The majority of the sources listed are peer-reviewed academic articles and reports commissioned by the government of Canada. All materials contained within the bibliography are in English, listed in alphabetical order by author and co-author. The databases utilized for this bibliography include: ProQuest, JSTOR, Google Scholar, Canadian Periodical Index and Scholars Portal (including Psych Info, Sociological Abstracts, Criminal Justice Abstracts, Criminal Justice Abstracts, Social Sciences Abstracts, Web of Science and Psychology). The terms used to search for relevant material include: anti-gang; gun; firearm; youth; recidivism. The searches were limited by a date criteria of 1999 and the bibliography was completed on May 23, 2014.

Braga, A. A., Kennedy, D. M., Waring, E. J., & Piehl, A. M. (2001). Problem-oriented policing, deterrence, and youth violence: An evaluation of Boston's Operation Ceasefire. *Journal of Research in Crime and Delinquency*, 38(3), 195-225.

This study analyzed the effectiveness of Operation Ceasefire, an interagency problem-oriented policing intervention that began in 1995, aimed at reducing youth homicide and youth firearms violence in Boston. Operation Ceasefire represented a highly innovative partnership between a multitude of researchers and practitioners to assess the city's youth homicide problem—much of which was concentrated among a small number of chronically offending gang-involved youth, where less than 1% of gang members in about 61 gangs were responsible for at least 60% of all youth homicides in the city. The authors found that Operation Ceasefire was based on both (1) a direct law-enforcement attack on illicit firearms traffickers supplying youth with guns, and (2) the “pulling levers” deterrence strategy that focused criminal justice attention on sending the message that violent behaviour would evoke an immediate and intense response. The study's evaluation suggests that the Ceasefire intervention was effective as it was associated with significant reductions in youth homicide victimization, shots-fired calls for service, and gun assault incidents in Boston. More specifically, the implementation of the program led to a significant decrease in the number of Boston youth homicides from 44 youth homicides between 1991 and 1995, to 26 and then further decreased to 15 youth homicides in 1997 after the implementation of the program. The study concluded with a comparative analysis of youth homicide trends in Boston relative to youth homicide trends in other major U.S. and New England cities, supporting a unique program effect associated with the Ceasefire intervention.

Braga, A. A., Pierce, G. L., McDevitt, J., Bond, B. J., & Cronin, S. (2008). The Strategic Prevention of Gun Violence among Gang-Involved Offenders. *Justice Quarterly*, 25(1), 132-162.

This study examined the results of a 1996 US Department of Justice-sponsored Project Safe Neighbourhoods initiative, an interagency task force that implemented a pulling levers strategy part of problem-oriented policing to prevent gang-related gun violence in Lowell, Massachusetts. The study's problem analysis research revealed that the pulling levers strategy, focused on deterrence that is tailored to the characteristics and dynamics of local gangs and the operational capacities of law-enforcement organizations, social service agencies and community-based groups, was associated with a significant reduction in serious gun violence in Lowell. While Lowell experienced a modest increase in gun violence between 2004 and 2005, gun-violence counts in 2005 remained lower than gun-violence counts in the pre-test period. What is noteworthy is that the "Safety First" intervention led to a statistically significant decrease in the monthly number of gun homicide and gun-aggravated assault incidents by 27.8% between 1996 and 2005, from a pre-test monthly mean of 5.4 incidents to a post-test monthly mean of 3.9 incidents. While evidence on the effectiveness of the pulling levers strategy in other cities is quite limited, a comparative analysis of gun homicide and gun-aggravated assault trends in Lowell relative to other major Massachusetts cities also supports a unique program effect associated with the pulling levers intervention. However, the authors note that for the intervention to work would require the involvement of multiple agencies and the community, as well as substantial investments in analysis, coordination, and implementation.

Bynum, T.S., and Varano, S.P. 2002. "The Anti-Gang Initiative in Detroit: An Aggressive Enforcement Approach to Gangs." In *Gangs, Youth Violence and Community Policing*, edited by S.H. Decker. Belmont, CA: Wadsworth.

This article examined the intervention and operation of Detroit's Anti-Gang Initiative (AGI). The study focused on four primary data sources: weekly arrest summaries prepared by the GSU sergeants responsible for each project precinct, police offense and arrest data, field notes, and interviews with GSU officers. The Anti-Gang Initiative in Detroit incorporated suppression strategies that involved (1) traditional crackdown responses that target smaller geographic areas in each precinct, and (2) a hybrid of intensive supervision approached used by the Boston Police Department for Operation Night Light, which targeted violent juvenile offenders. The authors found that the period of time following the implementation of Detroit's AGI program saw a considerable decline in gun crimes in the target precincts, whereas the number of such offenses rose in the comparison precinct. This was particularly the case in the Ninth Precinct, where the authors found a statistically significant reduction of gun crimes. Perhaps more importantly, the authors suggest that this reduction represented 112 fewer gun crimes, and thus a commensurate fewer number of victims, per month in this precinct. Given the design of this study and available data, these results cannot be directly attributed to the intervention. However, the authors conclude that there is a strong indication that these policing tactics that are particularly intensive against youth gangs contributed significantly to this meaningful reduction in Detroit.

Corsaro, N., Hunt, E. D., Hipple, N. K., & McGarrell, E. F. (2012). The impact of drug market pulling levers policing on neighbourhood violence. *Criminology & Public Policy*, *11*(2), 167-199.

This article examined the High Point (North Carolina) Drug Market Intervention (DMI), the first site to use pulling levers as a place-based policing approach to disrupt a series of open-air drug markets across the city. Eleven years of longitudinal data are analyzed by using difference-in-difference panel regression analyses combined with finite mixture estimation as a means to test for divergence in violent crime patterns. Several key, although inconsistent, findings are presented. First, the authors found a statistically significant reduction in violent offenses in specific high-crime places (i.e., high-trajectory census blocks) located across the different targeted neighbourhoods compared with the remainder of High Point, and relative to comparable non-targeted areas. Second, the citywide violent crime rate actually increased after a series of interventions unfolded, which may suggest limitations with the approach. Finally, trend analyses indicated the strategy had different levels of violent crime impact throughout unique geographic contexts. The authors then provide policy implications, and suggest that rather than arresting every offender identified as having participated in illicit drug trafficking across various geographic contexts within the city, officials in High Point decided to invite low-risk drug offenders to community notification sessions in order to change their perceived risk of punishment as well as to mobilize community members across the different targeted neighbourhoods. The suggestive evidence of potential, although limited, violent crime impact illustrates that this type of policing strategy may hold considerable promise. The inconsistent findings across all locations and the overall city increase in violent crime toward the end of the study period, however, raise several concerns when interpreting study results. Additionally, our findings suggest that further replications should include systematic problem-identification, process measures, and more precise research designs.

Esbensen, F. A., Peterson, D., Taylor, T. J., Freng, A., Osgood, D. W., Carson, D. C., & Matsuda, K. N. (2011). Evaluation and evolution of the Gang Resistance Education and Training (GREAT) program. *Journal of School Violence*, *10*(1), 53-70.

The scholars conduct a follow-up analysis of the Gang Resistance Education and Training (G.R.E.A.T.) program, a gang- and delinquency-prevention program delivered by law enforcement officers within a school setting. Originally designed in 1991 by Phoenix-area law enforcement agencies, the authors found that the program quickly spread across the United States. The 13 G.R.E.A.T. lessons aim to teach youths the life-skills thought necessary to prevent involvement in gangs and delinquency and resist peer pressure to engage in illegal activities. In this article, the authors described the evolution of the program and its responsiveness to two independent national evaluations funded by the U.S. National Institute of Justice. The first evaluation revealed little program effect and contributed to a critical review and substantial revision of the G.R.E.A.T. “core” or middle-school curriculum. Preliminary findings from the ongoing second evaluation give an initial indication of the extent to which these changes have resulted in the achievement of G.R.E.A.T. program goals of helping youths to (a) avoid gang membership, violence, and criminal activity; and (b) develop a positive relationship with law enforcement. Specifically, the G.R.E.A.T. students compared to non-G.R.E.A.T. students were

more likely to report positive attitudes about police, less positive attitudes about gangs, more frequent use of refusal skills, greater resistance to peer pressure, and lower rates of gang membership. The authors concluded that the collaboration between researchers and the G.R.E.A.T. National Policy Board, the regional training centers, local law enforcement agencies, G.R.E.A.T.-trained officers, school districts, school administrators, and teachers made will allow this school-based approach to be refined continually to provide the best possible contribution to gang and delinquency prevention.

Fritsch, E. J., Caeti, T. J., & Taylor, R. W. (1999). Gang suppression through saturation patrol, aggressive curfew, and truancy enforcement: A quasi-experimental test of the Dallas anti-gang initiative. *Crime & Delinquency*, 45(1), 122-139.

This article examines the implementation of an anti-gang initiative in the Dallas Police Department in 1996 that was designed to reduce gang violence. The program defined target areas that were home to seven of the city's most violent gangs received overtime-funded officers to implement several different enforcement strategies. The strategies included saturation patrol and aggressive curfew and truancy enforcement. Control areas were selected, and pre-intervention and post-intervention measures of gang violence and offenses that were reported to the police were analyzed. The findings from this study indicated overall that there was a statistically significant decrease (57%) in gang-related violence in the target areas with the program in place. Aggressive curfew and truancy enforcement specifically led to significant reductions in gang violence, whereas simple saturation patrol alone was not effective in decreasing the level of gang violence in these areas. The authors noted that the number of gang-related juvenile homicide victims dropped from 6 during the first time period studied to 2 during the second. In addition, the authors found no significant reductions in offenses reported to the police. The authors conclude by suggesting that police gang suppression programs may not affect gang membership or the conditions that create gangs, however it is possible that these programs affect the nefarious effects of gangs which involved crime and serious gun violence. The authors propose that the best way to reduce gang violence is through the implementation of interagency cooperation and information-sharing models in a city saturated with gun violence.

Grogger, J. (2002). The Effects of Civil Gang Injunctions on Reported Violent Crime: Evidence from Los Angeles County. *Journal of Law and Economics*, 45(1), 69-90.

This article examines the impact of civil gang injunctions on patterns and levels of violence within the areas where gangs have been enjoined in Los Angeles. These injunctions prohibit the public association of documented gang members within specific geographic areas. Individuals who have been served under the injunction may not possess cell phones or pagers in these areas. The research focuses on all areas of Los Angeles County where gang injunctions had been employed through early 2001. One of the primary criticisms that the author levied against these spatially targeted gang interventions is that they do little to reduce overall gang crime because they only serve to displace crime and gang activity to neighbouring areas. Using a carefully constructed comparison sample, and a "Difference in Differences" approach that controls for local as well as global trends in the data, the author demonstrates that not only do civil gang

injunctions result in reductions of violence in the range of 5 – 10%, but areas adjacent to active gang injunctions also experienced a small, though statistically significant, reduction in crime. Like many other evaluations of spatially targeted interventions, the author concludes that rather than displacing crime, these spatially targeted interventions provide positive externalities to neighbouring areas.

McGarrell, E. F., Chermak, S., Wilson, J. M. and N. Corsaro (2006). “Reducing Homicide Through a “Level-Pulling” Strategy.” *Justice Quarterly*, 23(2): 214- 231.

The authors note that the decade of the 1990s witnessed large declines in homicide and serious firearm related violence. Yet, despite these unexpected declines, rates of firearms crime in the United States remain high compared to other western democracies. The authors articulate one promising approach to gun crime that emerged in Boston during the mid 1990s. This approach combined face-to-face communication of a deterrence message to youth gang members with social service outreach and crackdowns on several gangs. Boston experienced significant declines in youth gun crime, as did Minneapolis where the intervention was later replicated. This paper presents the results of a study of similar gun crime reduction efforts in Indianapolis. Using time-series analyses, the authors suggest a significant decline in homicide rates in Indianapolis is very similar to those observed in Boston and Minneapolis. Comparisons to six similar Mid-western cities revealed that Indianapolis was the only city to experience a significant decline in homicide rates. The results are discussed in the context of deterrence research and suggest the need to move beyond single-city evaluations of promising interventions.

McGarrell, E. F., Corsaro, N., Melde, C., Hipple, N. K., Bynum, T., & Cobbina, J. (2013). Attempting to reduce firearms violence through a Comprehensive Anti-Gang Initiative (CAGI): An evaluation of process and impact. *Journal of Criminal Justice*, 41(1), 33-43.

This study examines the Comprehensive Anti-Gang Initiative (CAGI) implemented across 12 U.S. jurisdictions. Annual firearm homicide trends are examined in a balanced panel regression framework in order to test whether CAGI cities experienced changes in gun homicide (i.e., a gang violence proxy) between pre- and post-intervention, and accounting for cross-city program dosage, relative to shifts in comparable non-CAGI cities. The results from the article find that CAGI cities experienced a significant decline in gun homicide rates post-intervention. Inclusion of CAGI dosage measures suggested a modest though specific effect of law enforcement on gun homicide rates relative to comparable US cities. However, the authors uncover several important limitations with the CAGI framework as applied in practice because there was no indication of sustained law enforcement or target city impact. The article concludes that the evidence of limited impact suggests several points. First, comprehensive gang funding should be prioritized for jurisdictions at the highest risk of gang violence. Second, given difficulties in implementation, efforts like CAGI would benefit from a planning period that would allow for the establishment of intensive and timely prevention and re-entry programs to run in conjunction with suppression activities. Third, much greater investment and attention to building reliable and valid measures of gang crime are needed.

Tillyer, M. S., Engel, R. S., & Lovins, B. (2012). Beyond Boston Applying Theory to Understand and Address Sustainability Issues in Focused Deterrence Initiatives for Violence Reduction. *Crime & Delinquency*, 58(6), 973-997.

This study provided a critical analysis of the issues in focused deterrence initiatives for violence reduction. Focused deterrence initiatives, including the most famous, Boston's Operation Ceasefire, have been associated with significant reductions in violence in several U.S. cities. Despite early successes, the authors recognized that some cities have experienced long-term sustainability issues. Recent work in Cincinnati, Ohio, has focused on institutionalizing focused deterrence in an attempt to achieve sustainability. Despite these efforts, it became apparent that institutionalization was necessary, but insufficient, to achieve long-term success. This study turns to criminological theory to understand why focused deterrence works and how the model can be improved to maximize crime prevention potential. In doing so, the authors draw from the principles of effective intervention from correctional rehabilitation research and describe how these elements have been integrated into the Cincinnati Initiative to Reduce Violence.

Tita, G. E., Riley, K. J., and P. Greenwood. "From Boston to Boyle Heights: The Process and Prospects of a "Pulling Levers" Strategy in a Los Angeles Barrio." In Scott H. Decker, Ed. (2003). *Policing Gangs and Youth Violence*. Belmont, CA: Wadsworth/Thomson Learning.

This article describes an effort to apply two important components of the Boston Gun Project, "problem solving" and "lever pulling," to Boyle Heights - a particularly violent area in the city of Los Angeles. A thorough analysis on violence in the Boyle Heights/Hollenbeck area was completed through a combination of quantitative and qualitative data analysis. The independent research confirmed much of the conventional wisdom in that a large majority (approximately 75%) of the gun violence in the community was committed by members of the nearly 30 unique urban street gangs, and the most of the gang violence was motivated by long standing rivalries. The authors also demonstrate that the gang violence had a clear structure. First, they show that by employing social network analysis, one can get a clear picture of precisely which gangs fight each other. Second, using a spatial typology that classifies crime events by an overlap of crime location, victim residence, and offender residence, the research team also concluded that most gang events are predatory (where the perpetrator invades the victim's neighbourhood). Finally, the authors are able to demonstrate that some gangs are more actively involved in gun violence (as victims and/or offenders) than others, and that within the gang, some members are more likely to be perpetrators of victims of violence than other gang members. This information was value in the design of the intervention and aided in the targeting of limited resources towards the most violent gangs and individuals. The authors conclude by stating that any violence reduction strategies must always set a clear goal of reducing violence (versus violence reduction strategies that attempt to reduce gang violence or drug violence).

Wortley, S. (2011). Youth gangs and violence: Characteristics, causes and prevention strategies.

This article conducted an extensive analysis of the existing peer-reviewed academic literature on community-based crime prevention strategies implemented across the United States. The programs that were examined in this study include Operation Ceasefire in Boston, Chicago's Spengel model, Gang Resistance Education and Training (GREAT), as well as the Philadelphia Youth Violence Reduction Partnership (YVRP). The author argues that while some targeted gang prevention strategies may be effective at reducing gang violence in the United States, the implementation of such models may have a different effect in Canada which has yet to be properly evaluated. For this reason, the author calls for more research to be done within the Canadian context to establish multiagency programs that involve the cooperation of police departments, community members, the government, and academic scholars to develop an anti-gang strategy that are specific to the nature of gang violence in Canada. Furthermore gang suppression efforts are very expensive and not cost-effective. The author concludes by suggesting that community-based crime prevention programs will only be effective in Canada in so far as they: address multiple risk factors, operate across social settings, contain skill-based components that increase educational attainment and improve employment prospective of youth, build social competence skills, offer school-based programs, culturally-specific, and lastly, the programs need to be extensively monitored and evaluated to establish effectiveness.

CONCLUSIONS REGARDING THE IMPLEMENTATION OF ANTI-GANG INITIATIVES

Overall, the findings support the implementation of anti-gang initiatives in cities that have problems with youth gun violence. The vast majority of the studies involved a quasi-experimental test that primarily focused on anti-gang initiatives across the United States. First, the articles seem to support the balancing of law enforcement strategies as well as "pulling levers" interventions, which are effective at reducing levels of youth gun violence. Pulling levers strategies draw on the problem-oriented policing frameworks and focus criminal justice attention on sending the message that violent behaviour would evoke an immediate and intense response (Kennedy, 1997). Kennedy (2009) provides evidence that "informing high-risk offenders through specially convened public notification sessions that expedient arrest, prosecution, and enhanced sanctions will result if future criminal activity occurs can substantively change the perceived risk of punishment among those notified." The pulling levers strategy implemented in Boston's intervention was effective as it was associated with significant reductions in youth homicide victimization, shots-fired calls for service, and gun assault incidents in Boston (Braga, et al., 2001). However, as Corsaro et al. (2012) have found, much less is known about the viability of pulling levers when applied to different contexts that have yet to implement the strategy as well as to diverse groups of offenders. Tita, Riley, Ridgeway, Grammich, Abrahamse, and Greenwood (2003) recognized this as well and concluded that unlike the lasting success in Boston where the "pulling of levers" imparted a lasting deterrent effect, the reduction of gun violence in Los Angeles was short lived as once the resources began to exit the targeted areas, violence began to increase. The authors conclude by chronicling the difficulties faced in trying to

implement an invention that involves cooperation among a variety of criminal justice agencies, social service providers, and community-based organizations.

While there is limited research of community-based crime prevention strategies in Canada, the conclusion from most academic discourses seems to point in the direction of having well-rounded, comprehensive gang-intervention strategies that target multiple facets of young peoples' lives. Such programs appear to be effective in reducing gang membership and gun violence (Wortley, 2011). These multiagency programs must include various youth-serving organizations and criminal justice agencies to customize the goals of collaboration, consider the particular nature of the youth violence problem in the city it will be implemented in, and consider the particular capacities available in the city for incorporation into a strategic intervention. Therefore, programs such as Operation Ceasefire may unlikely be a highly specifiable, transportable “technology.” However, certain process elements of the Boston Gun Project, such as the central role of the line-level working group and the use of both qualitative and quantitative research to “unpack” chosen problems, should be generally applicable to other problem-solving efforts of gang prevention.

THE IMPLEMENTATION OF ANTI-POVERTY PROGRAMS IN HIGH-RISK NEIGHBOURHOODS AND ITS EFFECT ON GUN VIOLENCE

This section refers to both scholarly and non-scholarly materials regarding the implementation of anti-poverty programs in high-risk neighbourhoods in Canada and the United States its potential effects on youth gun violence. The majority of the sources listed are peer-reviewed academic articles and reports commissioned by the government of Canada. All materials contained within the bibliography are in English, listed in alphabetical order by author and co-author. The databases utilized for this bibliography include: ProQuest, JSTOR, Google Scholar, Canadian Periodical Index and Scholars Portal (including Psych Info, Sociological Abstracts, Criminal Justice Abstracts, Criminal Justice Abstracts, Social Sciences Abstracts, Web of Science and Psychology. The terms used to search for relevant material include: poverty; gun; firearm; youth; high-risk neighbourhoods. The searches were not limited to a specific date criteria and the bibliography was completed on May 23, 2014.

Kramer, R. C. (2000). Poverty, inequality, and youth violence. *The Annals of the American Academy of Political and Social Science*, 567(1), 123-139.

This article focuses on understanding the connection between poverty, inequality and youth violence in the United States. The authors draw on economic and political theories to identify three macro forces that have had important consequences for the problem of youth violence. These forces are (1) the socially defined position of youth, (2) the impact of market relations, and (3) poverty and inequality. The authors found that poverty and inequality had a disintegrative effect on social institutions through the lack of resources and emotional stress. Moreover, the author finds that negative structural conditions such as poverty or family disruption affect youth crime and delinquency, but largely through family and school process variables. These three forces evolved together as part of the transformation of the US economy to monopoly capitalism, and they have acted collectively to weaken informal mechanisms of social control and therefore increase youth violence. Accordingly, the authors conclude by suggesting a primary prevention approach to youth violence should concentrate on the need to reduce poverty and inequality and develop more inclusionary public policies. More specifically, the author suggests that the US needs to make a commitment to long-term permanent intervention in the labour market to allow for the direct public job creation, policies to upgrade wages and narrow existing disparities in earnings, an improved national system of job training, greater support for workplace organization through the labour movement, policies to spread the social costs of the transfer of jobs abroad, and legislation to shorten work hours and spread available work time to reduce youth violence.

Leonard, L., Rosario, G., Scott, C., and J. Bressan (2005). Building Safer Communities: Lessons Learned from Canada's National Strategy. *Canadian Journal of Criminology and Criminal Justice*, 47(2): 233-251.

The purpose of this article is to discuss emerging trends in the development and implementation of locally based actions directed at crime prevention and community safety in Canada. Since the

1980s, several provinces in Canada have initiated crime prevention strategies with a focus on community and social development. In Canada, after a crime drop from 1995-1999, the national crime rate increased by six percent in 2003. Research on crime control strategies in the United Kingdom, Australia, and the United States revealed that the programs considered community safety to be a major component to governance and that local participation in crime prevention efforts show the community that the local government is positioned to effectively address crime and its prevention. The Crime Prevention Investment Fund (CPIF) had funded fifty-five large-scale projects and their evaluations. Results from some of the projects indicate reductions in offending, improved school attendance and academic achievement, decreased levels of violence, increased pro-social behaviours, and improved community safety. In addition, for the national strategy in Canada, building and maintaining local partnerships is key to the sustainability of the programs through collaborative action. Community-based prevention initiatives are the most promising. The authors conclude that the National Crime Prevention Strategy process and outcome evaluations have helped to produce evidence-based results, but also identify promising directions for future research.

Neumayer, E. (2003). Good Policy Can Lower Violent Crime: Evidence from a Cross-National Panel of Homicide Rates, 1980-97. *Journal of Peace Research*, 40(6): 619-640.

This article provides empirical evidence that good political governance and good economic policies can lower homicide rates. Using rigorous econometric testing based on a cross-national panel of homicide data from 117 countries over the period 1980-1997, Neumayer provides empirical evidence that policies that favour inclusion in governance and economic opportunity (but not equality) can lower homicide rates. The study tests modernization theory, opportunity theory, the impact of good policy in the area of equity, the impact of good political governance, and human rights violations on homicide rates. Dependent variables include cross-national data of homicide rates from the International Criminal Police Organization (Interpol), the United Nation (UN), and the World Health Organization (WHO). The independent variables include the gross domestic product (GDP) per capita in purchasing power parity, its growth rate, and the percentage of people living in urban areas as relevant variables in modernization theory. Urbanization data is from the World Bank. Other independent variables are economic inequality and relative deprivation. After controlling for cultural factors in employing a fixed-effects estimator and controlling for various factors suggested by modernization and opportunity theory, Neumayer's analysis demonstrates how good policies can lower homicide rates. The results suggest that economic growth, higher income levels, respect for human rights, and the abolition of the death penalty are all associated with lower homicide rates. The same conclusion holds for high levels of democracy where Neumayer suggests that violent crime is not simply determined by modernization, population characteristics, and cultural factors. Results also indicate that policies aimed at improving equity have no effect on violent crime. In particular, there is evidence that the positive effect of income inequality on homicide rates found in many studies might be spurious. The results reported suggest that an effective way to lower homicide rates would be to implement policies that achieve good economic outcomes.

Spano, R., & Bolland, J. M. (2011). Is the Nexus of Gang Membership, Exposure to Violence, and Violent Behavior a Key Determinant of First Time Gun Carrying for Urban Minority Youth?. *Justice Quarterly*, 28(6), 838-862.

This article focuses on the correlation between gang membership and violence in high-poverty settings. The authors allude to the “fear and loathing” hypothesis which suggests that youth living in extreme poverty will carry a gun for the first time primarily to protect themselves and/or their family from being a victim of violence. As a result, these more recent studies of youth gun carrying since the surge in youth violence in the early 1990s suggest that widespread exposure to violence in the community (rather than the nexus of gang membership, exposure to violence, and violent behavior) has resulted in the diffusion of gun carrying to a much broader spectrum of youth living in high-poverty settings. The authors find that although a large body of research suggests that the combination of gang membership, exposure to violence, and violent behavior will increase the likelihood of gun carrying by minority youth living in extreme poverty, only 1.8% of Mobile Youth Survey (MYS) youth fall within this nexus, which is a very small percentage that represents a statistical anomaly that is unlikely to be a significant predictor of first-time gun carrying. The authors conclude by providing policy implications that suggest researchers must move beyond documenting the concentration of youth gun violence in high-poverty settings and focus on the intersection of risk factors that are precursors for gun-related violence.

CONCLUSIONS REGARDING THE IMPLEMENTATION OF ANTI-POVERTY PROGRAMS

The limited availability of research regarding the implementation of anti-poverty initiatives makes it difficult to conclude if there is a direct correlation between poverty and youth gun violence. There is, however, evidence to suggest that broader social and economic forces such as poverty, inequality and social exclusion may contribute to the problem of youth violence in the United States (Kramer, 1998). Moreover, Kramer (1998) finds that these structural factors tend to foster lethal violence by youth indirectly through their impact on the close-in institutions of the family, school, and community. Scholars acknowledge that programs designed to reduce poverty and economic inequality in the United States does not have a high priority these days.

For this reason, further inquiries that focus extensively in the implementation of anti-poverty strategies are needed in order to understand whether a nexus exists between the reduction of poverty and youth gun violence in Canada and the United States. This will allow academic scholars to better inform public policy decisions as a way to alleviate problems of poverty and inequality, and ultimately youth gun violence. For now, studies suggest that there is a need for government economic aid for people who cannot find work but still cannot lift themselves out of poverty. Perhaps providing more generous, universal social services are required to reduce youth violence, particularly in the areas of childcare and health care. A secondary prevention approach to youth violence would point to the need to establish early-childhood intervention programs for high-risk children and their families (Kramer, 1998).

THE IMPLEMENTATION OF MANDATORY MINIMUM SENTENCES AND THEIR EFFECTS ON GUN VIOLENCE

This section refers to both scholarly and non-scholarly materials regarding the implementation of mandatory minimum sentences and their effects on gun violence. The majority of the sources listed are peer-reviewed academic articles. All materials contained within the bibliography are in English, listed in alphabetical order by author and co-author. The databases used for this bibliography include: JSTOR, Google Scholar, and Scholars Portal (including Psych Info, Sociological Abstracts, Criminal Justice Abstracts, Social Sciences Abstracts). The terms used to search for relevant material include: gun; firearm; stop and search; stop and frisk. The searches were not limited to a specific date criteria, and the bibliography was completed on May 28, 2014.

Abrams, D. S. (2012). Estimating the deterrent effect of incarceration using sentencing enhancements. *American Economic Journal: Applied Economics*, 4(4), 32-56.

Increasing criminal sanctions may reduce crime through two primary mechanisms: deterrence and incapacitation. Disentangling their effects is crucial for optimal policy setting. This article uses sentence enhancements due to the introduction of state add-on gun laws to isolate the deterrent effect of incarceration. Using cross-state variation in the timing of law passage dates, the article finds that the average add-on gun law results in a roughly 5 percent decline in gun robberies within the first 3 years. This result is robust to a number of specification tests and does not appear to be associated with large spillovers to other types of crime.

Deutsch, S., & Alt, F. (1977). The effect of Massachusetts' gun control law on gun-related crimes in the city of Boston. *Evaluation Review*, 1(4), 543-568.

The impact of legislative changes involving Massachusetts' Gun Control Law on gun-related crime is evaluated. These legislative changes make a serious effort to curb violent crimes involving firearms by imposing a mandatory one-year minimum sentence for anyone convicted of carrying a firearm without an appropriate license. One purpose of this article is to measure the deterrent effect of this law. The evaluation focused on the law's potential impact on the occurrences of homicide, assault with a gun, and armed robbery. Viewing crime rates as realizations from some underlying stochastic processes, a procedure for measuring intervention effects on crime rates is presented. Time series on gun-related crimes for the city of Boston are analyzed with this procedure in evaluating the impact of the gun control law. The analysis indicates a statistically significant decrease in both armed robbery and assault with a gun in the given time period.

Durlauf, S. N., & Nagin, D. S. (2011). Imprisonment and crime. *Criminology & Public Policy*, 10(1), 13-54.

Durlauf and Nagin argue that if we want both to reduce crime and to reduce imprisonment in the United States, then we need to redesign our sentencing policies and policing practices based on a

keener understanding of deterrence. Channeling the 18th century philosopher Cesare Beccaria, they contend that the certainty of punishment is a far greater deterrent to crime than the severity of punishment. Their argument centers on the specific roles that sentence lengths and the police play in deterring criminal activities. The article states that lengthy prison sentences, particularly in the form of mandatory minimum statutes such as California's three strikes law, are difficult to justify on a deterrence-based, crime-prevention basis. They marshal considerable evidence demonstrating that increasing the severity of punishments by extending sentence lengths does little to deter crime, but more and smarter policing does. Durlauf and Nagin's first main policy prescription is to repeal or greatly restrict lengthy mandatory minimums sentences.

Gabor, T. (2001). Mandatory minimum sentences: A utilitarian perspective. *Canadian Journal of Criminology*.

In Canada, over two dozen offenses in the criminal code carry mandatory minimum sentences (MMS), including first and second degree murder, a series of firearm-related offenses, impaired driving and related offenses, high treason, and gambling offenses. A recent review of literature revealed skepticism in relation to these penalties. These laws have been subjected to attacks on the basis of their questionable crime preventive benefits, fiscal and human costs, violation of proportionality in sentencing, disproportionate effects on minorities, and their encroachment upon judicial powers. The sentences vary greatly in their gravity and in terms of the thresholds at which they are triggered. The utility of MMS depends on its marginal deterrent and incapacitative effects over existing sentencing policies. Mandatory sentencing was seen as contributing to unwarranted disparities. This article states that the introduction of a one-year MM for using a firearm in crime was accompanied by a modest decrease in the proportion of homicides and robberies committed by firearms, and that gun homicides and/or robberies have declined in several American jurisdictions following the introduction of firearm sentence enhancements. On the other hand, there is evidence that there was a displacement to offences committed by other weapons. Recommendations were presented in the adoption of sentencing guidelines similar to the United States Federal system, bringing about predictable sentences, without the rigidity of mandatory minimum, allowing judges to depart from the guidelines when mitigating or aggravating circumstances dictate.

Hofer, P. J. (2000). Federal sentencing for violent and drug trafficking crimes involving firearms: recent changes and prospects for improvement. *American Criminal Law Review*, 37, 41.

This article briefly reviews empirical studies of the operation of mandatory firearm sentencing enhancements and their effectiveness at controlling gun crime. A study of the Massachusetts' "Bartley Fox Amendment" find that there was some evidence of a shift away from the use of firearms in assault, although no overall deterrent effect on homicide, assault, or robbery rates were detected. A few years later, there were declines in armed robberies and homicides, along with gun assaults. There was also evidence of an increase in non-gun assaults and robberies, suggesting that criminals were moving away from gun crimes to other modes of operation. The article also states that rates of firearm homicide were consistently reduced in various

jurisdictions of Michigan, Florida, and Pennsylvania, but no consistent reduction was found in rates of gun assault or robbery. A comprehensive analysis shows that firearms sentence enhancements (FSEs) were not associated with a decrease in gun-related crime.

Loftin, C., Heumann, M., & McDowall, D. (1983). Mandatory sentencing and firearms violence: Evaluating an alternative to gun control. *Law and Society Review*, 287-318.

Michigan's Felony Firearm Statute (Gun Law) imposed a two-year mandatory add-on sentence for defendants convicted of possession of a firearm in the commission of a felony. The Law was widely advertised with proponents claiming that it would introduce greater equity in sentences, ensure certainty of punishment, and decrease violent crime in the state. This article examines the processing of these Gun Law cases in Detroit Records Court, as well as the effects of the law on crime, and find that most of the goals of the Law's proponents are not met. Notwithstanding a rigid prosecutorial policy which prohibited plea bargaining in these gun cases, alternative mechanisms developed to mitigate the Law's effects and, in most instances, to preserve the "going rate" for various crime categories. Similarly, using an interrupted time-series model, we are unable to uncover effects of the law, or the associated publicity campaign, on violent crime.

Loftin, C., & McDowall, D. (1981). "One with A gun gets you two": Mandatory sentencing and firearms violence in Detroit. *Annals of the American Academy of Political and Social Science*, 455(, Gun Control), 150-167.

Mandatory sentences for crimes committed with a gun are a popular policy because they promise a reduction in gun violence at a relatively low cost. In this article we present some results of a study of the implementation of such a law in Detroit, Michigan. Two major questions are discussed: (1) what effect did the Michigan gun law have on the certainty and severity of sentences; and (2) did the gun law reduce the number of serious violent crimes in Detroit? This article finds that, although the law required a two-year mandatory sentence for felonies committed with a gun and the prosecutor followed a strict policy of not reducing the gun law charge, there was little change in the certainty or severity of sentences that could be attributed to the effects of the gun law. Only in the case of assault was there a significant change in the expected sentence. Also serious violent crimes-murder, robbery, and assault-follow patterns over time that lead us to conclude that the gun law did not significantly alter the number or type of serious crimes in Detroit.

Marvell, T. B., & Moody, C. E. (1995). The impact of enhanced prison terms for felonies committed with guns. *Criminology*, 33(2), 247-281.

Legislation mandating minimum sentences or additions to sentences for crimes committed with guns is a frequent response to gun problems. This article compiled these state laws and estimated their impact on state prison populations, prison admissions, UCR crime rates, and gun use in homicides, assaults and robberies. The authors employed a multiple time series research design, with data for nearly all states over the past 16 to 24 years, such that for any one state the

remaining states operated as controls. Several small-scale studies have suggested that the laws might reduce some types of gun crime. The research found that the laws produced such an impact in no more than a few states and that there is little evidence that the laws generally reduce homicides and other gun-related offences.

McDowall, D., Loftin, C., & Wiersema, B. (1992). Comparative Study of the Preventive Effects of Mandatory Sentencing Laws for Gun Crimes. *J. Crim. L. & Criminology*, 83, 378.

This article examines the effects of mandatory sentencing laws for gun crimes in the U.S. The data analyzed in the article is based on six city-specific case studies, which monitored the effects of mandatory sentencing on violent crime in Detroit, Jacksonville, Tampa, Miami, Philadelphia and Pittsburgh. This comparison provides an estimate of the aggregate preventive effect of the announcement of the laws. If the laws were effective in reducing firearm crimes, the number of gun offenses should decrease in the post-intervention period. In Detroit, there was a statistically significant decrease in gun homicides. In Florida, there were significant decreases in Tampa gun homicides and Jacksonville gun assaults. On the other hand, there was a significant increase in Tampa gun assaults. There were no changes in the frequency of gun assaults or robberies in Pennsylvania, although there was a decrease in gun homicides. From these results the article concludes that the MM statutes have no preventive effect. No individual study provides clear support for the proposition that mandatory sentencing reduces firearm violence. Results of the comparative analysis find that gun homicides were reduced, but gun assault results were mixed. Robbery and assault series do not reflect the preventive effects.

McPheters, L. R., Mann, R., & Schlagenhauf, D. (1984). Economic response to a crime deterrence program: Mandatory sentencing for robbery with a firearm. *Economic Inquiry*, 22(4), 550-570

This paper reports the results of the application of intervention analysis, an interrupted times series methodology, to test the deterrent response of criminal offenders faced with changes in the penalty structure for the crime of robbery with a firearm. The results are consistent with the hypothesis of general deterrence as set out by Becker and extended theoretically and tested empirically by others. Offenders in Arizona metropolitan areas rapidly reduced the number of robberies with a firearm supplied as penalties for firearm use became more severe. This finding suggests legislation which punishes those who choose to use such weapons in illegal activities may be effective while leaving intact the rights of private citizens to own firearms. One disturbing finding was that a portion of the deterrent effect of harsher mandatory sentencing for firearm use in robbery may have been offset by substitution of other types of robbery not covered by the new legislation.

Pierce, G., & Bowers, W. (1981). The Bartley-Fox gun law's short-term impact on crime in Boston. *The Annals of the American Academy of Political and Social Science*, 455(1), 120-137.

By making the illicit carrying of a firearm punishable with a one-year "mandatory" prison term, the Massachusetts (Bartley-Fox) gun law intervenes at what appears to be a critical juncture—from the standpoint of deterrent effectiveness and political feasibility—in the chain of decision that leads from the acquisition of a gun to its use in a crime. Drawing on FBI crime data, this article employed interrupted time series techniques and multiple control group comparisons to examine the impact of the law on gun and non-gun assault, robbery, and homicide. First, the law substantially reduced the incidence of gun assaults, but produced a more than offsetting increase in non-gun armed assaults. Evidently, the law prevented some individuals from carrying and using their firearm, but it did not prevent them from becoming involved in assaultive situations and resorting to other weapons. Second, the law resulted in a reduction in gun robberies, accompanied by a less than corresponding increase in non-gun armed robberies. In effect, weapons substitution effect for armed robbery was relatively less than for armed assault. Third, the law reduced gun homicides with no increase in non-gun homicides. Thus, the gun law produced a net decline in the incidence of criminal homicide. Finally, the timing of the law's impact suggests that it was the publicity about the law's intent rather than the severity or certainty of the punishments actually imposed under the law that was responsible for the observed reductions in gun-related crimes.

Raphael, S., & Ludwig, J. (2003). Prison sentence enhancements: The case of Project Exile. *Evaluating gun policy: Effects on crime and violence*, 251, 274-77.

Enhanced prison penalties for gun crimes enjoy widespread support from all sides of the United States gun policy debate. These enhancements have the potential to reduce gun violence by incapacitating individuals who have been convicted of gun crimes and deterring such crimes in the future. Richmond, Virginia's, Project Exile, established in 1997 was declared a success when Richmond showed a 40 percent reduction in gun homicides from 1997 to 1998. This chapter examines the impact of Project Exile on homicide and other crimes. The outcome measure used as the primary focus of this evaluation was the city's homicide rate. It is argued that the reduction in Richmond's gun homicide rates surrounding the implementation of Project Exile was not unusual and that almost all of the observed decrease probably would have occurred even in the absence of the program. Project Exile is a coordinated effort of Richmond law enforcement and the regional U.S. Attorney's office to prosecute in Federal courts all felon-in-possession-of-a-firearm (FIP) cases, drugs-gun cases, and domestic violence-gun cases, regardless of the number. The Federal penalties for these offences are more severe. It is effectively a sentence enhancement program. Since its inception in 1997, several indicators of criminal activity in Richmond have improved substantially. This examination of the data suggests that the observed reduction in gun homicides would have occurred whether or not the program had been implemented.

CONCLUSIONS REGARDING THE IMPLEMENTATION OF MANDATORY MINIMUM SENTENCES FOR GUN VIOLENCE

Overall, the findings do not support the effectiveness of mandatory minimum sentences for reducing gun-related crime. The majority of the studies conclude that it is difficult to justify mandatory minimums on a deterrence based, crime prevention model, and that there is little evidence that the laws generally reduce gun crime. For example, Nagin (2013) argues that studies of the deterrent effect of increases in already long prison sentences find at most a modest deterrent effect. Another example was a study by Loftin et al. (1983), which evaluated Michigan's Felony Firearm Statute, which imposed a mandatory two-year minimum for possession of a firearm in the commission of a felony. They found that the goals of the Law's proponents (to reduce gun crime and social disorder) were not met and the effects of the law on crime were meager.

While the majority of the studies conclude that mandatory minimums are not effective in reducing gun violence, some studies suggest preliminary findings that there are modest decreases in gun-related homicides, assaults, and armed robbery. For example, Pierce and Bowers (1981) state that assaults, robberies and a net decline in the incidence of homicides committed with firearms was found with the implementation of the Massachusetts (Bartley-Fox) gun law.

Largely, the effects of these enhanced prison sentences have found to be short term and also raise issues of crime displacement. Gabor (2001) asserts that there was a displacement to offences committed by other weapons. Similarly, Hofer (2000) provides evidence of an increase in non-gun assaults and robberies, suggesting that criminals were moving away from gun crimes to other modes of operation. Another interesting thing to note is the suggestion that it was the publicity about a law's intent, rather than the severity of the punishments imposed under the law, that was responsible for the observed reductions in gun related crimes (Pierce, 1981). Raphael and Ludwig (2003) also suggest a regression effect when they propose that the reduction in Richmond's gun homicide rates surrounding the implementation of Project Exile was not unusual, and that almost all of the observed decrease probably would have occurred even in the absence of the program.

THE IMPLEMENTATION OF STOP AND FRISK ACTIVITIES AND THEIR EFFECT ON GUN VIOLENCE [INCLUDING HOT-SPOTS POLICING]

This section refers to both scholarly and non-scholarly materials regarding the implementation of stop and frisk activities and their effects on gun violence. The majority of the sources listed are peer-reviewed academic articles. All materials contained within the bibliography are in English, listed in alphabetical order by author and co-author. The databases used for this bibliography include: JSTOR, Google Scholar, and Scholars Portal (including Psych Info, Sociological Abstracts, Criminal Justice Abstracts, Social Sciences Abstracts). The terms used to search for relevant material include: gun; firearm; stop and search; stop and frisk. The searches were not limited to a specific date criteria, and the bibliography was completed on May 28, 2014.

Braga, A. (2001). The effects of hot spots policing on crime. *The Annals of the American Academy of Political and Social Science*, 578(1), 104-125.

In recent years, researchers have argued that police actions should be focused on high-risk crime places rather than spread thinly across the urban landscape. This review examines the available evaluation evidence on the effects of concentrating police enforcement efforts on crime hot spots. Five randomized experiments and four nonequivalent control group quasi-experiments were identified. One of the studies discussed in this article is the Kansas City Gun Project, which applied intensive enforcement of laws against illegally carrying concealed firearms via safety frisks and searches. The findings of these evaluations suggest that focused police actions can prevent crime and disorder in crime hot spots. These studies also suggest that focused police actions at specific locations do not necessarily result in crime displacement. Unintended crime prevention benefits were also associated with the hot spots policing programs. Although these evaluations reveal that these programs work in preventing crime, additional research is needed to unravel other important policy-relevant issues such as community reaction to focused police enforcement efforts.

Cohen, J., & Ludwig, J. (2003). Policing crime guns. *Evaluating Gun Policy: Effects on Crime and Gun Violence*, 217-239.

This article asserts that the Pittsburgh program provides at least suggestive evidence that targeted patrols against illegally carried guns may reduce gun crime. Their analysis suggests that the policing program may have reduced shots fire by as much as 34%, and hospital-treated assault gunshot injuries by 71% during “on” days in program treated areas. No evidence of displacement was found. Police contacts were initiated mainly through traffic stops and “stop and talk” activities with pedestrians but later moved to pat-downs on the outside of clothing to check for weapons. The central finding is that the Pittsburgh firearm suppression patrols (FSPs) appear to substantially reduce citizen reports of shots fire and gunshot injuries in the target neighborhoods.

Fagan, J. (2002). Policing guns and youth violence. *The Future of Children*, 12(2, Children, Youth, and Gun Violence), 132-151.

To combat the epidemic of youth gun violence in the 1980s and 1990s, law enforcement agencies across the United States adopted a variety of innovative strategies. Some cities focused on aggressive enforcement against youth suspected of even minor criminal activity, some focused on alternatives to arrest, and some used a combination of approaches. Key findings in this article include: 1) Law enforcement agencies that emphasized police-citizen cooperation benefited from a more positive image and sense of legitimacy in the community, which may have enhanced their efforts to fight crime. 2) Aggressive law enforcement strategies, including frequent use of “stop and frisk” tactics may have contributed to a decline in youth gun violence, but they also may have cost police legitimacy in minority communities where residents felt that the tactics were unfair or racially motivated. None of the initiatives presented in the case studies has been shown conclusively to reduce youth gun crime over the long term. The author suggests that policing alone cannot contain youth gun violence

Koper, C. S., & Mayo-Wilson, E. (2006). Police crackdowns on illegal gun carrying: A systematic review of their impact on gun crime. *Journal of Experimental Criminology*, 2(2), 227-261.

This paper presents a systematic review of the impact of police strategies to reduce illegal possession and carrying of firearms on gun crime, including directed patrols, monitoring of probationers and parolees, weapon reporting hotlines, and others. Four studies met the inclusion criteria, reporting a total of seven nonrandomized tests of directed patrols focused on gun carrying in three American cities (five tests) and two Colombian cities (two tests). Six of the seven tests (not all of which were independent) suggest that directed patrols reduced gun crime in high-crime places at high-risk times. However, conclusions and generalizations must be qualified based on the small number of studies, variability in study design and analytic strategy across the studies, preintervention differences between intervention and comparison areas, and limited data regarding factors such as implementation, crime displacement, and long-term impact. Based on regression analyses, the authors estimated that the bans (on all gun carrying) reduced homicides 13%-14% when they were in effect. In Bogota', the authors estimated that the bans had comparable effects on gun and non-gun homicides, reducing the former by 15% and the latter by 12%. In California, the estimated reductions were 23% for non-gun homicides and 10% for gun homicides, though this was not a statistically significant difference. When the bans were in effect, police enforced them through roadblock checkpoints (which were usually established in high-crime areas), searches during traffic and pedestrian stops, searches of patrons in bars, and other routine activities.

Ludwig, J. (2005). Better gun enforcement, less crime. *Criminology & Public Policy*, 4(4), 677-716.

Project Safe Neighborhoods (PSN), which for the past several years has been the major federal initiative to combat gun violence, includes several elements (such as gun locks, targeted patrols

and other efforts to reduce gun availability) that research suggests are likely to have at best modest effects on gun crime. The article finds that targeted patrols, including stop and search activities prove to reduce the amount of “shots fired,” and also a reduction in assault related gunshot injuries. In general, enforcement activities targeted at the “demand side” of the underground gun market, including stop and search tactics, currently enjoy stronger empirical support. The main argument of this article is that enforcement resources could be made more effective by prioritizing demand-side enforcement activities, particularly targeted police patrols (including stop and frisk) that seek to deter high-risk people from carrying guns illegally. However much of PSN's budget has been devoted to increasing the severity of punishment, such as by federalizing gun cases, which seems to be less effective than targeted street-level enforcement designed to increase the probability of punishment for gun carrying or use in crime.

Makarios, M., & Pratt, T. (2012). The effectiveness of policies and programs that attempt to reduce firearm violence: A meta-analysis. *Crime & Delinquency*, 58(2), 222-244.

In response to rising rates of firearm violence that peaked in the mid-1990s, a wide range of policy interventions have been developed in an attempt to reduce violent crimes committed with firearms. Although some of these approaches appear to be effective at reducing gun violence, methodological variations make comparing effects across program evaluations difficult. Accordingly, in this article, the authors use meta-analytic techniques to determine what works in reducing gun violence. The results indicate that comprehensive community-based law enforcement initiatives have performed the best at reducing gun violence. In the seminal study in Kansas City, officers increased stops and searches of citizens in hot spot beats compared to control beats and the results indicated that the number of guns seized in the treatment beat increased and the number of gun crimes decreased. Replications and extensions of hot spots-directed patrol have shown support for these programs' ability to reduce gun crime. Directed patrol policing strategies were shown to have a moderate impact on firearms violence.

Sherman, L. W., & Rogan, D. P. (1995). Effects of gun seizures on gun violence: “Hot spots” patrol in Kansas City. *Justice Quarterly*, 12(4), 673-693.

This article examines the Kansas City Gun Experiment's hypothesis that greater enforcement of laws against carrying concealed weapons could reduce firearm violence. Of the 29 guns seized by officers on hot spot patrols, 10 (34%) were detected during a safety frisk. Increased carrying arrests might deter the casual, routine carrying of firearms, and thereby indirectly reduce opportunistic robberies. The article supports the hypothesis that police can reduce gun violence by more enforcement of laws against gun carrying in high-risk places by high-risk people at high-risk times. The article asserts that using methods such as safety frisks may incapacitate individuals for the short term, for example, allowing the cooling of their anger at someone they had planned to shoot. It may also reduce the supply of rent-a-guns widely circulated for criminal purposes. The article suggests that the 1434 traffic and pedestrian stops deters potential gun criminals. The argument appears plausible enough to suggest that targeted patrols can reduce gun crime. The Kansas City evidence suggest that increasing gun seizures can reduce gun crime without local displacement, but caution that only repeated tests of the hypothesis will show whether that prediction is correct.

ON THE IMPACT OF STOP AND FRISK

Hanink, P. (2013). Don't trust the police: stop question frisk, compstat, and the high cost of statistical over reliance in the NYPD. *Journal of the Institute of Justice & International Studies*, 13.

Using data collected by the New York City Police Department, this research applies social disorganization theory and conflict theory to the NYPD "stop question frisk" practice. This paper discusses the rise of "stop question frisk" along with the implementation of CompStat and explores whether the rate at which the police employ "stop question frisk" within a precinct is based solely upon a precinct's crime rate, or whether the stops rate is influenced by factors such as race or poverty. This research draws three conclusions. First, the crime rate in a given precinct is the strongest predictor of the rate of stops within it. Second, the interaction between the percentage of precinct population that is Black and the percentage below the poverty line is a statistically significant predictor of the rate of stops. Third, the use of "stop question frisk" as a police practice may help explain the lower rates of police approval among Black New Yorkers. Consequences for police legitimacy are discussed, suggesting that if these practices are continued the NYPD will lose citizen cooperation and compliance.

**FINAL CONCLUSIONS FOR THE EFFECTIVENESS OF STOP AND FRISK
ACTIVITIES ON REDUCING GUN VIOLENCE**

Overall, the research suggests that focused police actions, including stop and frisk activities, can prevent firearm crime and disorder. The key point here is that the police stop and frisk/ search activities must be focused on *high-risk* crime areas rather than spread thinly across the urban landscape (Braga, 2001). For example, Koper and Mayo-Wilson (2006) found that 6 out of the 7 tests they conducted suggest that directed patrols reduced gun crime in *high-crime* areas at *high-risk* times. Similarly, Cohen and Ludwig (2003) found that the Pittsburgh firearm suppression patrols (FSPs) substantially reduced citizen reports of shots fired and gunshot injuries in target neighborhoods by 34% and 71%, respectively. The research also supports the hypothesis that the best initiatives are ones that increases the certainty, rather than the severity of punishment. Ludwig (2005) suggests that enforcement resources are better spent on initiatives such as targeted police patrols (including stop and frisk) that deter high-risk people from illegally carrying guns, instead of the budget being spent on increasing the severity of punishment with initiatives such as mandatory minimum sentences. Sherman and Rogan (1995) agree with Ludwig when they assert that gun seizures resulting from hot spot targeted patrols may deter the routine carrying of firearms and indirectly reduce opportunistic robberies. As a whole, the research supports the hypothesis that stop and search activities can reduce gun crime and deter potential gun criminals, without local crime displacement. However, an important point raised by Fagan (2002) and Hanink (2013), is the collateral costs of stop and frisk on citizen perceptions of the police. As both authors show, stop and frisk practices that disproportionately target racialized citizens may result in the development of negative attitudes towards the police amongst those most affected. Research has shown that these negative views of the police hinder police citizen cooperation – making it more difficult for the police to solve crime. Furthermore, negative attitudes towards the police may in fact contribute to criminal offending.