The Significance of Place and Gender: An Ohio

Violent Crime Victimization Study

by

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Abstract

This thesis tests the significance of place and gender (sex) to violent crime

victimization rates using deviant place theory. Place is represented in this study by 2010

Census Bureau metropolitan definitions: metropolitan and micropolitan principal cities,

metropolitan and micropolitan suburban places, and non-metropolitan places. Using

crime victimization data from the 2010 *National Incident-Based Reporting System*

(n=217), this thesis tests the significance of place and sex by running four ordinary least

squares regressions (OLS). Principal city and suburban places are hypothesized to have

the highest crime victimization rates due to sharing similar place characteristics (Osgood

& Chambers, 2000; Barnett & Mencken, 2002; Rogers, 2012; Hadac, 2012; Schmitt,

2013). It is hypothesized that place will be significant to the gap between sexes in

victimization rates, either by an increase or decrease in sex gaps within the different

places. The end results show that place overall is a significant factor with metropolitan

principal cities having the strongest relationship to crime victimization and victimization

sex gaps. The percent variance noted in the R^2 of the regressions show that place

accounts for 23% of the murder victimization rates, 12% of total violent crime, 10%

aggravated assault, 7% robbery and 5% rape. The percentages decrease when the sex gap

is included; however, these results do indicate place and sex are significant factors to

victimization.

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Chapter I

Introduction

Perceptions of crime and victimization tend to shift when one thinks of urban, suburban, and rural areas. The Bureau of Justice Statistics repeatedly shows that urban areas have the highest victimization rates and males are most likely to be victimized (Truman, Langton, & Planty, 2013). Conversely, some studies (Barnett & Mencken, 2002; Rogers, 2012; Schmitt, 2013) show strong relationships between crime in suburban and rural places even in the area of victimization. For example, a 2000 study found rural female teenagers displayed higher rates of dating violence and victimization (Spencer & Bryant, 2000). The purpose of this research is to create a place and gender (sex)-focused analysis of metropolitan principal cities, micropolitan principal cities, metropolitan suburban, micropolitan suburban and non-metropolitan areas. Violent crime victimization rates in Ohio will be analyzed while utilizing Stark's (1987) deviant places theory. Previous studies have not focused on both sex and the Census Bureau's defined metropolitan geographical places that are utilized in this study. If significant relationships can be found between violent crime victimization rates, geographical locations, and sex, then this would be an important area for further research. The problems this thesis addresses and purpose of the thesis are discussed in the following pages.

Problem Statement

This thesis addresses several important issues. Criminology theories are too focused on individual characteristics of residents within places and they ignore the places themselves. Stark emphasized the importance of place by looking into urban neighborhoods and utilized many individual and urban traits. An overemphasis on inner

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cities is evident in crime research. A main question addressed in this thesis is to what extent is violent crime victimization related to place? Another question explored in this study is to what extent the gap in sexes with regards to victimization rates plays a role in the relationship with place. Understanding victimization rates in places can help law enforcement better prepare for and request the resources necessary to deal with those crimes. Addressing these issues involves controlling for demographic and socioeconomic variables to determine if place and sex remain significant influences on violent crime victimization rates. To test this theory, Ordinary Least Squares (OLS) regressions are used. If the perceived significance of place is correct, the relationship between violent crimes and both place and sex will remain strong in the presence of statistical controls. Significance to place will reiterate the need for including place and sex variables in future criminological studies.

Purpose and Need for the Study

When a crime related story makes headline news, crime rate statistics regarding either the crime itself, the demographics of the victim, or the likelihood of the crime happening in that particular place are soon to follow. To say crime rate studies have been vastly examined would be a true statement. To say crime rate studies have been exhausted and there is no room for expansion is wrong. Crimes change with the times and what was once regarded as relevant information becomes irrelevant. New areas of focus will always be there for the taking and should be examined to see if there are significant factors that are being overlooked. Examining crime through different variables and methods of analysis and finding relationships that were not considered before is essential

for several reasons. Perhaps the best explanation for continued crime rate research is given by the Uniform Crime Reporting Program (2011):

> UCR crime statistics are used in many ways and serve many purposes. They provide law enforcement with data for use in budget formulation, planning, resource allocation, assessment of police operations, etc., to help address the crime problem at various levels. Chambers of commerce and tourism agencies examine these data to see how they impact the particular geographic jurisdictions they represent. Criminal justice researchers study the nature, cause, and movement of crime over time. Legislators draft anti-crime measures using the research findings and recommendations of law enforcement administrators, planners, and public and private entities concerned with the problem of crime. The news media use the crime statistics provided by the UCR Program to inform the public about the state of crime. (p. 1)

This study is different from previous crime rate studies because sex and geographic places are the joint focus, while victims and crimes are units of analysis. This study differs from Stark's (1987) neighborhood based deviant place study by focusing on the contrast between places based on metropolitan classifications. This study uses one of the most current victimization data sets available in the 2010 *National Incident Based Reporting System* (NIBRS) data file. Although certain parts of this study have already been examined, speculations about recent trends in crimes growing in suburban and rural areas and supposed sex gaps decreasing justifies revisiting these topic areas. This study is unique for focusing on only Ohio crime rate and victimization data. Deviant places theory was included in this study because it notes the importance of place and place variables in

relation to crime. Sex is added in this study to the concept of place and crime to create a new aspect of deviant places theory and previous place-focused studies. Sex victimization rates, being tested for their relationship to metropolitan classified places, is unique in itself.

A study focusing on population change in suburban communities and the outcome those changes have on crime rates found that many of the factors that contribute to urban crime also contribute to suburban and non-metropolitan crime (Barnett & Mencken, 2002). Non-metropolitan regions have crime rates that are half the totals found in metropolitan regions. Many studies looking into rural crime find that stability in population is one of the reasons crime stays low in those developments compared to urban communities. Population change and stability have been found to be not as significant in non-metropolitan regions; instead, resource disadvantage plays the greatest role in determining if crime will be high in a given place (Barnett & Mencken, 2002). Resource disadvantages are in line with lack of social control, which Stark (1987) has cited as a crime and deviance risk factor in his deviant places theory. The focus on resource disadvantage is a good start, but that study does not attempt to compare the sex gap between places. Known differences in characteristics of rural developments compared to urban is reason enough for crime studies to explore distinctions and similarities between the places instead of crime studies always focusing on one specific place (Wells & Weisheit, 2004). There is also a need for other factors to be brought in and compared along with, not separate to, geographical locations such as sex is utilized.

Some research in this field of study only focuses on urban crime and why misfortunate circumstances in those communities leads to crime (King, 2013). Some

studies that do attempt to compare similarities and differences between urban and suburban life, crime, and perception of crime, unfortunately leave out non-metropolitan communities (Mears et al., 2012, Leverentz, 2012, Rogers, 2012, Hadac, 2012). Some general crime studies look into reasons why crime transfers from one community and spills into another (Ross, 2012). All of these studies show the movement of crime but none of these studies focus on all three types of places (principal cities, suburban, and non-metropolitan), nor do they look into victimization statistics between the places. Studies that explain drugs, their effect on offenders, and the movement of crime to other communities don't always explain the differences in places or sex of those involved in the offense (Murray, 2012, Gaines & Kraska, 2003, Lyman & Potter, 2003, Hotakainen, 2013). Each of these crime studies devotes little attention to victims of crimes. This study will be more of a rounded version of previous studies (though only focusing on Ohio) because a strategic group of geographic places will be discussed and crime victimization rates will be included.

The 2012 *National Incident Based Reporting System* statistics that were released and the 2012 *Justice Statistics* adequately demonstrate female offenders and victims are uniquely different from their male counterparts. Differences between the two sexes in previously released studies focusing on both offenders and victims, along with violent crimes and property crimes, is an indication there is reason to continue exploring differences between the two sexes. Female offenders were found to have more of an unfortunate history consisting of disadvantaged childhoods compared to male offenders (Estrada and Nilsson, 2012). If these sex-based offender findings can be supported by studying victimization statistics in Ohio, the results can add to the literature on

victimization. Victimization studies focusing on sex have found that female victims can be overrepresented in family violence (Sipes, 2012). Potential for overrepresentation of female victims to certain crimes may exist within this study, especially in the victimization rates for rape considering at the time of the data collection NIBRS only counted females as rape victims. However, the NIBRS data used in this study is based on crimes known to the police; therefore, any overrepresentation in one area could also be the result of crimes not being reported in another. This study aims to see if female victims are more likely than males to be connected to crimes based on the place where the offense occurs and the violent offences themselves. This will be studied by analyzing the gender (sex) gap between violent offense victimization rates. It is expected there will be differences in violent crime victimization between the sexes in regards to place.

A gender-based study (Steffensmeier, Zhong & Ackerman, 2005) looked into women and their growing representation in violent crimes. Female offenders and victims were studied based on data from the Uniform Crime Reports, National Crime Victimization Survey (NCVS), Monitoring the Future, and the National Youth Risk Behavior Survey. The researchers believed women commit violent crimes in intimate private settings while males are more likely to commit violent crimes in public places and against strangers. These offender statistics could mirror that of victimization statistics based on sex. The gender gap in violent crimes was calculated by taking the female rate and dividing it by the male plus female rate, then multiplying by 100 (Steffensmeier et al., 2005). The UCR data showed a significant increase in juvenile females arrested for violent crimes but the NCVS data showed no significance in female victimization; however, overall the findings did not indicate a general increase in male to female

victimization gaps (Steffensmeier et al., 2005). Many statistical findings have reinforced the claim that offenders have the highest risk of becoming victims compared to non-offenders (Barnes & Beaver, 2012, p. 3300). If the sex gap is closing and females are engaging in more crimes then they once did, then females'+ chances of being victims is growing as well. It will be interesting to see if there is also a sex gap based on location of offenses and if or how that sex gap changes as one travels out of the inner cities and into non-metropolitan areas.

Summary

This thesis is a violent crime victimization study. The emphasis of the study is on both place and sex. Studies in the field of crime rates are necessary and utilized by the government, law enforcement, and news media outlets, providing a wealth of information (Uniform Crime Reporting Program, 2011). Crime studies that do look into rural or non-metropolitan areas tend be overpowered by urban biases and need a new approach which can look into crimes in these areas in a way that does not rely on only urban variables and locations (Donnermeyer & DeKeseredy, 2008). This study is different from previous studies because place, sex, and victimization are all considered central focal points with victims' sex and violent crimes being differentiated between five places. This is also a unique study because the unit of analysis is Ohio victimization data. Relationships between victimization rates, place, and sex can be found by running an OLS regression and including individual level variables (control variables) along with place variables (independent variables) and determining if place and sex are significant once the individual variables are removed. Chapter Two will further explain findings on place and crime with an emphasis in Stark's deviant places theory. Statistics along with research

contrasting and comparing males and females in relation to crime will also be discussed in the following chapter.

Chapter II

Literature Review

Deviant Places

Rodney Stark (1987) researched crime and deviance with an emphasis on "kinds of places" instead of "kinds of people" (p. 893). Stark expands on Social Disorganization Theory (Shaw & McKay, 1942; see also, Kubrin & Weitzer, 2003) by detailing (through 30 propositions) how place traits influence people within those places and in return how that leads to deviance and crime. For the purpose of his research Stark detailed traits of specific neighborhoods and individual people that when integrating together will increase deviance and risk of crime. Stark believed that certain places (in his study place was referenced to neighborhoods) and the criminal traits of those places would lead to an increased chance of someone falling victim (proposition 23) to a crime as opposed to the actual traits of the area's inhabitants. Proof of place being more important than people is explained by examining a Seattle neighborhood that once had high crime rates. According to Stark, originally only Italians lived there; after the Italians moved out and Blacks moved in, the crime rate remained high in that same area (p. 893). The Italians in this example were originally thought to be the problem, but seeing a new wave of individuals move in and crime remain high proved otherwise. People can come and go but if crime remains high perhaps the place (and its ecological traits) is the reason behind that and not the people (as they are usually accused).

Stark's theory of deviance focuses on urban places and urban traits. Five urban factors influence deviance and crime according to Stark: density, poverty, mixed use, transience, and dilapidation (p. 895). These five place traits then create four individual

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traits: moral cynicism, increased opportunities for crime and deviance, increased motivation, and diminished control (p. 895). The end result of Stark's five place traits mixed with his four individual traits leads to a place attracting deviant and crime prone people, driving out the least deviant people, and reductions in social control (p. 895). Stark further explains his place and people traits through thirty propositions. Several of his thirty propositions emphasize density being one of the biggest risk factors of deviance and crime. In densely populated places, many people will come in contact with one another and crimes are more likely to occur. Suburban and rural areas are only mentioned in passing. In suburban and rural areas, individuals are less likely to interact with one another; as a result, crimes are less likely to take place and people there are less likely to be victimized. Stark explains how opportunities for deviance are not found in suburban and rural areas as easily as in central cities and urban places. In other words, the types of people could be the same in a given place, but the risk factors associated with the location is why chances for being victimized or engaging in criminal deviance may change.

Of importance from the Stark deviant places study is the five place traits. Density is not only tied to neighborhood characteristics, Stark also noted overcrowding within people's homes as part of the density problem. Poverty can be a misleading place trait considering the makeup of poor individuals. However, high poverty places attract poor people because that is the only area they can afford to live. Stark explains mixed use as areas where stores and outlets are abundant. People have more opportunity to not only run into one another, but these areas lead to congregating outdoors. Transience means populations are constantly changing: unfamiliar individuals are interacting with one another, thus there is a lack of personal ties. Finally, dilapidated and rundown

neighborhoods not only attract crime but they also create a stigma of that area. Though these place traits are urban-focused, they will be analyzed throughout this study to see if they can relate or be tied to suburban and rural areas as well. Place showing significance in several crime studies will be further discussed.

Stark's approach to deviant places is undeveloped in criminological theory. Too often studies citing Stark focus on people influencing the places, not places influencing people. I am attempting to recover the original Stark emphasis on crime in relation to places over people. Stark has been cited in numerous studies, many of which pertain to Social Disorganization Theory and briefly tie in deviant places (Bursik, 1988, Osgood & Chambers, 2000). Studies on places, specifically communities, can put an unfair label on a community; it is important to remember in place studies crime may be higher in a certain spot, which can make the entire place appear more crime-ridden than it truly is (Weisburd, Groff & Yang, 2014). That may be why Stark focused on neighborhoods to guarantee crime related to the specific place he was talking about. Victimization and crime rates don't always properly define the place they are representing. The five places that will be analyzed in this study may show unfair crime victimization rates to a certain place based on if the crime data from the municipal police department was turned in and because of populations being larger in certain places.

A study that expanded on Stark's neighborhood scope of place by focusing on zip code areas found there is also a significant relationship between population density and place to rates of violence, which supports Stark (Gruenewald, Freisthler, Remer, LaScala, & Treno 2006). Stark's perception that place and people variables should be integrated is incorporated in a macro-level analysis on crime that found both macro-level and micro-

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level measures were significant to victimization (Dobrin, Lee, & Price, 2005). Criminals become attracted to areas where social control is broken down. A non-metropolitan study found that similar social crime links exist in metropolitan and non-metropolitan places, especially ethnic heterogeneity and female headed households (Osgood & Chambers, 2000). That same study also noted the lack of police interference for minor offenses in areas where serious crime is abundant as was noted by Stark. Relating sex to Stark's theory of place was only slightly touched upon and showed parallel violence trends between males and females in urban and rural areas (Schwartz & Gertseva, 2010). Schwartz and Gertseva (2010) focused on violent crime arrest rates over a span of 25 years in urban and rural areas. They found that males continued to have higher arrest rates; however, females were narrowing the gap in assault arrests in both urban and rural places.

Other theorists and researchers have also noted the importance of place to crime. Without community controls the people within communities no longer take care of their surroundings; instead, they keep to themselves and allow disorder to take over their neighborhoods. Unkempt and neglected places become a breeding ground for crime. Social disorganization and community deterioration, which is often found in inner cities, leads to an increase in crime that is tied to the place more so than the people within the place (Shaw & McKay, 1942). If the disorganization of communities spreads far enough into other places, then crime will spread along with it. When communities are broken people in those places no longer prosper or try to improve their lives; instead, they accept and adapt to crime as is suggested by subculture theory (Cohen, 1955). Crime and its ties to ecology have been significant in the previously mentioned studies. These theories

show place is an area of criminal analysis that continually needs to be explored considering places are continually changing.

In the conclusion of Stark's study on deviant places he mentions the variable of sex. "What is suggested is that, although males will exceed females in terms of rates of crime and delinquency in all neighborhoods, males in certain neighborhoods will have much higher rates than will males in some other neighborhoods, and female behavior will fluctuate by neighborhood too"(Stark, 1987, p. 906). However, he did not go into detail in his research of sex and its relationship to places. This thesis will contribute to deviant places literature by exploring the idea that place and sex are important to analyze, especially for victimization rates. A study that did relate the variable of sex to Stark's theory of place showed parallel violence trends between males and females in urban areas (Schwartz & Gertseva, 2010). This study is unique because it includes a wider range of places and it compares the importance of place and sex for victimization rates. The following literature reviews analyze place and gender in the context of criminology.

The Social Ecology of Crime

This study will look into five kinds of places as defined by the 2010 census's Geographic Identifier File found in American FactFinder: metropolitan principal cities (largest cities in a metropolitan urbanized area consisting of 50,000 or more people), micropolitan principal cities (largest cities in a micropolitan urban cluster of 10,000 people to 50,000), metropolitan suburban (immediate areas surrounding metropolitan principal cities), micropolitan suburban (immediate areas surrounding micropolitan principal cities), and non-metropolitan (rural areas outside of metropolitan and micropolitan communities). It is expected that crime victimization rates analyzed in this

study will change based on the location of the offense and the sex of the victims involved. The changes can be noted by positive or negative significance in gender (sex) gaps of victimization. To base a study on place, previous statistics and research findings will be discussed. It is more common to find research focusing on urban, suburban, and rural areas than it is on all five places in this study; therefore, urban research will represent metro/micro principal cities, suburban research will tie into metro/micro suburban areas, and rural research ties into non-metropolitan places.

Urban

Metropolitan areas are often viewed as breeding grounds for crime because there are many risk factors associated with crime in urban communities. Urban crime is headline news so often that it is easy to assume all crime concerns are within principal cities and metropolitan regions. All five of Stark's place traits in his deviant places theory are tied to urban communities: density, poverty, mixed use, transience, and dilapidation. Poverty and dilapidation are especially widespread within principal cities. Poverty is a main concern tied to crime and becoming inter-generational within urban cities (King, 2013). The inter-generational aspect of poverty can be tied both to individuals and the places where they live. The demographics of those in principal cities consist of poverty stricken uneducated blacks (King, 2013). Stark (1987) noted that blacks living in the South are more likely to live in the suburbs but outside of the South they make up the greater population of inner cities (pp. 905-906). Middle class individuals (whites and blacks) find a better life by moving outside of the principal city (King, 2013). The fleeing of middle class individuals out of urban communities ties in with Stark's transience risk factor of deviant places. Part of the concern within principal cities is that policing efforts

are targeting certain groups of people which in turn label those groups of people as criminal. Unfair stigma perceived by residents within and those living outside of a place relates to Stark's increased motivation to deviate.

Stark's deviant place trait of moral cynicism among residents is evident from people living within principal cities and the viewpoint those from the outside have on principal cities. Crime has become expected in central cities to the point that the violent death of a black teenager does not carry the same attention (involvement of counselors and communities coming together) that a death of a white suburban teenager would bring (Leverentz, 2012, p. 359). Every risk factor of deviant places is found within metropolitan principal cities, considering the place traits are urban based and central cities are predominately urban. Urban whites and blacks believe that crime overall is a serious problem (Mears et al., 2012, p. 536). This could be because urban residents are exposed more to crime and violence, or because they are told of the crime problem by media reports. The locations where residents live and a history of violent crime within the location are significantly tied to negative perceptions and moral cynicism of residents within a given location (Hipp, 2013). As was already known, Stark's place traits are all tied into urban areas and in turn the metropolitan and micropolitan principal cities that are analyzed in this study. An aspect of this study is to see if many of Stark's urban place factors can be tied into suburban and rural places.

Suburban and Rural

In this section suburban and rural areas will be discussed alongside one another due to the fact that studies that actually do include rural areas usually do so while also talking about suburban areas. Suburban developments have seen a growth in crime and

have become an important area of study. Newer research has implied that crime once believed to be only in the principal cities and urban communities is now well into the suburbs. Violent crime is spiking in the suburbs (an increase of 16.9%), while tapering off in central cities (a decrease of 16.7%). This trend has been going on for the past 10 years (Schmitt, 2013). The heavy emphasis police have placed in patrolling crime in central cities can lead to crime moving to other places. If it is true that the suburbs are experiencing a growing amount of crime and drug problems when compared to principal cities, then this study should reflect that by showing similar statistically significant relationships between principal cities and suburban places for crime rates. There are many opinions and explanations offered to explain why crime is intensifying in the suburbs. Homicides are a growing concern especially with the media attention they generate (Rogers, 2012). Suburban homicides such as school shootings are making headlines across the nation. The gap between urban and suburban crime rates may be closing in based on types of crimes, when looking at recent crime stats.

Part of the concern with crime growing in the suburbs is the lack of resources for police departments, which may make it easier for criminals to not only commit crime in those places, but to get away with it as well (Roger, 2012). This supports another risk factor Stark discusses (diminished mechanisms of control). Many studies on crime in inner cities focus on the demographics and poor people living in those areas. However, demographics are shifting in the suburbs, and the wealthy and the educated are leaving the suburbs to move to bigger cities (Rogers, 2012). Dilapidation, poverty, and transience are all risk factors of deviant place theory originally tied to urban communities, but they are found in suburban communities as well. It is theorized that more efforts are made, by

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media and/or police, to cover up crime in suburban areas to make them appear safer (Hadac, 2012). If only minor offenses make the news, the suburbs look like an ideal place to live. Suburban crime statistics are becoming more difficult to ignore, and the risk factors associated with crime, which are easily found in the suburbs, make it easier to understand the increase. Metropolitan and micropolitan suburban areas are not as different from principal cities, and though Stark listed urban place traits, they can also be tied to suburban places.

Suburban and rural communities have seen drugs and crime spread to those areas. Heroin is infiltrating the suburbs from increased use by teenagers (90% of whom are white) choosing heroin as an alternative to expensive oral painkillers (Murray, 2012). The Substance Abuse and Mental Health Services Administration says that in 1999, 198 young adults (aged 15-24), died from heroin overdoses, and that same age group rose to 510 young people in 2009 (Murray, 2012). Linking drugs to crime has been used to explain crime in the inner cities for years, so it is easy to see that there may be a connection to drug use and crime in the suburbs. Hard core drugs are not the only substances of concern. Alcohol is the substance most often tied to violent crimes (Gaines & Kraska, 2003, p. 59). Based on many different findings, it is estimated that 50% of domestic abuse cases involve the offender, victim, or both being under the influence of either alcohol or drugs (Lyman & Potter, 2003, p. 5). Another study found that marijuana was the most often used drug by those who were recently arrested (Hotakainen, 2013). Whether it is heroin, crack, alcohol or marijuana, all of these crime-linked substances are attainable in suburban communities. Ohio has been named as one of the top states in America where methamphetamine labs are being seized, and Ohio Attorney General

Mike DeWine stressed that rural Ohio is where these labs are most often found (Caniglia, 2014). In summary, as drug use grows, crime and the likelihood for victimization increases.

The spread of crime into suburban and rural areas may be the result of other reasons besides demographic characteristics and drug use. Criminals have adapted to laws in one city or town by committing crimes elsewhere (Ross, 2012, p. 145). The "truth in sentencing" laws were put in place to keep offenders locked up and off the streets for 85% of their sentence as a way to stop them from harming future victims. California criminals have adapted to "truth in sentencing" by committing their third offense outside of the state of California and thus avoiding the "three strikes law" which includes harsher punishments (Ross, 2012, p. 114). Harshly enforced laws in some states or some principal cities are not always treated as harshly in other states or in suburban and rural areas, meaning criminals will a place to commit crimes based on their avoidance of harsher crime laws.

Diminished mechanisms of control are found in the suburbs and rural areas and encourage deviance. Many of the place traits (density, poverty, transience, mixed use, dilapidation) Stark believes create a deviant place were once only common in principal cities and urban communities, but now those same factors are found elsewhere. Studies focusing on places concentrate on urban areas without paying attention to non-metropolitan regions, which is troubling because close to 65 million people in America live in non-metropolitan communities (Lee, 2006). Non-metropolitan areas appear to have many of the deviant place risk factors; therefore, they are important to be included

in crime rate studies. As the next section will note, the sex of individuals involved in crime, either offenders or victims is also an important area of focus.

Sex Specific Crime Rates

This study focuses on places of crime, but this research advances Stark's deviant places one step further by showing that not only do places play crucial roles in crimes, but so too does sex. Stark (1987) ended his deviant places theoretical ideology by saying sex is an important variable but it has not been tested in ecological ways (p. 906), so this study further explores this idea. Stark suggests males' rates of crime and deviance may fluctuate based on the neighborhood they live and the same could be true for females. Studies mentioned in this section will show evidence that there is a clear difference between crime and victimization statistics between males and females. Demographic variables such as age and race have been shown in the past to display significant differences based on the sex of the victim (Kruttscnitt, 1996). For example, men have higher crime rates in all categories except prostitution (Steffensmeier & Allan, 1996, p. 5). Men are more likely than females to be victimized by strangers, but women are more likely to be victims of those they are intimately involved with and therefore they may be more reluctant to report the crime (Steffensmeier & Allan, 1996). Failure to report a crime by female victims may lead to underrepresentation of the sex in certain criminal areas. Other studies have shown how female victimization is rising in crime statistics but sometimes that can be misleading based on the way the study was conducted. Females are often misrepresented in crime statistics such as the Uniform Crime Reports, and many female offenders commit criminal acts mostly when in the accompaniment of male

offenders (Steffensmeier, 1993). There are obvious sex differences in both offender and victim statistics; therefore, the present research is important.

The gender gap is decreasing in crime rates, especially with respect to violent crimes. The violent crime victimization rates of males was 15.7 per 1,000 and females 14.2 per 1,000 in 2010 (Truman, 2011). The 2012 NIBRS results indicated that females made up 50.9 % of the victims while only being 24.7% of the offenders (fbi.gov, 2013). Females in state prisons are more likely than males to have HIV (2.6% to 1.8%), mental health issues (73% to 55%), suffer sexual abuse (57.2% to 16.1%), and use drugs (40% to 32%) (Sipes, 2012). If there are clear differences in the characteristics of a female offender when compared to a male offender, then differences between female and male victims are important to explore as well. Victims of family violence were females 73% of the time according to 2005 statistics (Sipes, 2012). Female victims are most often associated with domestic violence, and as high as female statistics are in that area, it is alarming to realize that many cases don't even get reported. With respect to the victimization literature, it is expected that there will be sex gap differences between male and female victims of violent crimes within Ohio.

The life course differences amongst males and females and the role it plays in crime and victimization has been vastly researched. Female offenders tend to have a later age of onset to crime and they are more likely than males to be drug abusers (Estrada & Nilsson, 2012). Poverty is often linked to crime, and female offenders often experience more poverty growing up compared to male offenders. Unfortunate childhoods, drug use, and poverty are high risk factors for any individual to become a criminal and thereby increase the likelihood of becoming a victim as well. The rise in female drug use has

contributed to the overall rise of the female numbers in crime statistics (Steffensmeier & Allan, 1996).

If more research can show that females are more likely than males to have a number of these high risk factors, then that could explain a female's chances of victimization. Female offenders are more likely to have demographic risk factors linked to crime compared to males, that is, female offenders tend to have experienced disadvantaged childhoods and drug use at higher rates compared to males (Estrada & Nilsson, 2012). If male and female demographics relating to crime are different, then it should be no surprise if the places used in this study result in significantly different crime rate findings based on the gap between sexes.

Comparing sex and location is worthy of analysis not only because differences exist between the sexes, but because the gender gap is decreasing in many areas. Women are more likely than men to be victimized or involved in violence within their own neighborhoods and for being victimized by non-strangers (Lauritsen & Carbone-Lopez, 2011). If females are more likely to be victims closer to home, then females in suburban and rural areas should have higher victimization rates because males are more likely than females to be victims of strangers and to be involved in violence within disadvantaged neighborhoods and central cities. The same study found that central cities play an important role in a woman's likelihood of violence at the hands of strangers. Another study focusing on victimization and location (Grossman, Hinkley, Kawalski, & Margrave, 2005) found that location and race played a more significant correlation than did location and sex.

Abuse statistics were similar between rural and non-metropolitan communities; however, those living in non-metropolitan communities were less likely to call police and needed more help given the lack of resources in rural areas (Barnett & Mencken, 2002). Lack of resources is a continuing focal point of crime statistics in suburban and non-metropolitan regions. Studies of location and sex tend to focus towards outside factors, and not pay enough attention to the variables of sex and location (as this study is going to do). Non-metropolitan areas are important to include in crime rate studies because they not only have similar social characteristics to urban areas, but they also have their own significant place factors.

Ohio Victimization Facts

In this particular study Ohio crime victimization data is used as a test case for the hypotheses and analysis. Violent crime victimization statistics in Ohio are said to be reflective of the national average, which shows that there is a close gap between males and females (males at 15.7, females at 14.2). Ages 12-25 years are most likely to be victimized, and Blacks make up the major amount of violent crime victims (Ohio Criminal Justice Statistics, 2010). Total violent crime rates are lower in Ohio compared to the national average. Murder victims in Ohio are predominately young black males. Rape rates in Ohio are higher than the national average, and robbery and aggravated assault rates have slowly been declining in Ohio. The male to female gap closing in Ohio victimization rates is a key factor that should ring true in the regression analysis of this study.

Research Hypothesis

Definitions

The definition of place, as used in this study, was based off of the data analysis unit of municipal police departments which were grouped into a place category via the Census Bureau's American FactFinder tool. Metropolitan areas are said to have an urbanized area of 50,000 or more people. Micropolitan areas have an urban cluster of 10,000 to 50,000. Non-metropolitan areas fall outside of metropolitan and micropolitan regions. The five regions in this study are defined as the following: Metropolitan principal (largest city in a metropolitan area), micropolitan principal (largest city in a micropolitan area), metropolitan suburban (areas surrounding metropolitan principal cities), micropolitan suburban (area surrounding micropolitan principal cities), and non-metropolitan (rural areas outside of metropolitan and micropolitan communities).

It is important to properly define the level of place an ecological study is analyzing because many place-focused studies refer to different ideologies of place. As is true for a 1995 crime theory study which defined place as "a very small area, usually a street corner, address, building, or street segment" (Eck & Weisburd, p. 1). Place carries on a much larger meaning than an individual address in this analysis. The place variables used in this study are from the Census Bureau and American FactFinder, which define place in a wider array of ways than the previously cited 1995 study did. The Census Bureau refers to places within a state as a zip code, neighborhood, community, municipality, or named points on a map (Ratcliffe, 2010). Place in this study is the metropolitan level within Ohio.

The term sex is used throughout this study and at times is interchanged with the term gender such as when discussing the gender gap. Merriam-Webster Encyclopedia online (2014) defines gender as "the state of being male or female." Sex is defined by the same definition in the Merriam-Webster Encyclopedia and that is why the words are used interchangeably throughout. Many crime studies that focus on the variable of sex are considered gender-based; however, the variables are often still referred to as sex (male and female). NIBRS relates data to the variable of sex by classifying victims as male, female, or unknown. There is no way of knowing how victims with sex-changes are categorized for the variable of sex.

Hypotheses

The studies mentioned above have shown that place is significant in crime studies, though the use of the concept has resulted in deemphasizing place itself, and place has taken on many different meanings. The five places of analysis in this study are expected to be significant factors in violent crime victimization. These five places represent locations that have not been analyzed in this context. It is hypothesized that metro/micro principal cities and metro/micro suburban areas will share similar violent crime victimization statistics due to the fact that the places themselves share similar geographical and demographical characteristics as was noted earlier in the literature review (Osgood & Chambers, 2000, Barnett & Mencken, 2002, Rogers, 2012, Hadac, 2012, Schmitt, 2013). Non-metropolitan communities are expected to be the most distinct of the five places because, though the area has many similar traits to suburban and rural places, the area lacks one of the principal crime risk factors in density (Stark, 1987) and

past studies have shown crime in rural areas often goes unreported (Grossman et al., 2005).

The demographic of sex is hypothesized to be significant based on place. Significant sex differences have been found in previous studies (Steffensmeier, 1993, Kruttscnitt, 1996, Lauritsen & Carbone-Lopez, 2011, Estrada & Nilsson, 2012, Sipes, 2012) either in victim or in offender focused articles. Males in this study are expected to have a stronger relationship to being victims in metro/micro principal places compared metro/micro suburban places. This is expected because males have been shown to be more likely to engage in criminal activities within principal cities (Lauritsen & Carbone-Lopez, 2011). The gender gap is expected to decrease for females who are expected to display a stronger relationship to victimization in metro/micro suburban compared to non-metropolitan areas and metro/micro principal cities. Females have been shown to be most likely victimized close to home by non-strangers (Lauritsen & Carbone-Lopez, 2011, Sipes, 2012). Wherever the results indicate a stronger victimization rate for females it will likely be a location where the female victims live.

Summary

Stark (1987), in his thirty propositions, relates place to crime and shows how important place-based studies are. However, Stark's theory focuses on individual traits and only includes urban place traits. This study believes that those urban traits are important to increase deviance within places; however, they are not principally urban traits. Now many of those traits are found in the suburbs and rural areas. Studies that have explored place and crime have either focused on one type of place or they have defined places in terms of demographic and socioeconomic characteristics, not place

characteristics. Stark's brief mention of sex brings up an important point. Males and females have different statistics regarding offender and victim risk factors and characteristics; therefore, it is no stretch to assume they will have different likelihoods of being victimized in a given place. The victimization gap between sexes in a given place could be close as well. Unlike Stark (1987), this study expands place to include Census geographical locations that can provide for a wider analysis of places. The study also focuses on violent crime victimization specifically in Ohio. The purpose of this study is to see if the research hypotheses are correct and place, separate from individual variables, is significant to violent crime victimization rates. The second hypothesis being tested is if gender gaps show significance based on place and violent crime victimization rates. The way of analyzing and testing the hypotheses are detailed in the next chapter.

Chapter III

Methods

Research Method and Design

This study is a secondary data analysis. The unit of analysis is municipal police departments which is a central point around which data from various sources is integrated. There are a total of 217 departments included in this study, all of which are Ohio municipal police departments. The data has already been collected by an outside source (NIBRS) and consists of a large sample size. Data that is collected in quantitative studies can be statistically analyzed, and that is a major component of this study. This study is only concerned about samples collected from Ohio; therefore, the research findings in this study can only be generalized to Ohio. In quantitative studies, such as this one, the subjects within the study are unknown to the researcher and the only identifiers are demographic variables. Being disconnected from the sampled subjects is an excellent way to avoid any potential bias within that area of the research. When using a quantitative approach it is important for the researcher to know that the end result may not support the original hypothesis. This study looks for relationships between variables as determined by OLS regressions; if relationships do not exist they will still be included.

The importance of place in this study means that this is also an ecological study. Geographical location is one of the most important units of analysis within this study. The dependent variables are being measured at a group level within the five geographical locations that were selected (metropolitan principal, micropolitan principal, metropolitan suburban, micropolitan suburban, and non-metropolitan). The places used in this study are macro-level places defined by the Census Bureau and American FactFinder.

Data was collected by the public use 2010 *National Incident-Based Reporting System*. The F.B.I. uses data collected by NIBRS for part of the Uniform Crime Reporting Program. All crimes reported to NIBRS are crimes known to the police. It is the responsibility of municipal police departments to turn in the crime data; therefore, the municipal police departments are the unit of analysis. NIBRS was specifically chosen because it is one of the most up to date crime data collections and it contains variables pertaining to the research at hand. The file from NIBRS specifically chosen for this study is the victims file. Individual crimes are counted per incident, but each incident can be counted twice based on how it is classified. Crimes are assigned by sex to female, male, or unknown classifications and there is a total classification. Though the data in NIBRS is a nationwide collection, only the Ohio victims file is used for this analysis.

After selecting the victims file from NIBRS, the data was narrowed down to Ohio violent crimes and the variables necessary for this study were chosen. The Ohio victims file was merged to the agency Uniform Crime Report file. Next, the data was merged to the 2005 Crosswalk file (Law Enforcement Agency Identifiers Crosswalk [United States], 2005, ICPSR 4634) which links municipal department data with crime and Census data. When the police agency name is entered into the Crosswalk file it gets a geocode and is then merged to the Census file. American FactFinder is the Census Bureau's online tool that has place level data which is merged to Crosswalk and then can be merged to the violent crimes victimization rates from NIBRS.

The statistical findings in this study were completed using Statistical Package for the Social Sciences (SPSS) software version 20. Originally the data was opened and merged using Stata, a data analysis and statistical software program. The Stata NIBRS

file package was then sent to and opened by SPSS where the data was analyzed. Many of the variables used in this study displayed skewness (lack of symmetry in the shape of the distributions) and high levels of kurtosis (above normal distributions) along with heteroscedasticity (a varied amount of variance in the dependent variables across the data) (Statistics.com, 2014). The data results are not affected by skewness, kurtosis or heteroscedasticity because measures are taken to correct the symmetry of the data variables by either transforming them to the square root or log. A robust regression was then run on the variables via Stata. Four total regressions were run for analysis, victimization to place and controls combined (Table 2), victimization to place and control variables separately (Table 3), gender gap victimization to place and controls combined (Table 5), and gender gap victimization to place and control variables separate (Table 6). The R-squared (R^2) results of the victimization regressions (Table 4) and sex gap regressions (Table7) were collected for purposes of showing the variance to which place is important to victimization rates.

Research Variables

Dependent variables in this study are violent crime victimization rates taken from the NIBRS 2010 data file. NIBRS was specifically chosen because it is one of the most current victimization data files. Dependent variables analyzed in this study include crime rates of UCR index violent crimes: total crime, murder, rape, robbery, and aggravated assault. The purpose for choosing violent crimes was because they have known victims and given this is a victimization study that was a necessary factor. As noted previously, rape is an unnecessary variable for the sex focus of this study because the variable of rape in the 2010 NIBRS data collection only counts females as rape victims. It is still included

in this study; however, for the place aspect of the study. A histogram was run on all dependent crime variables and it was determined taking the square root would provide for the best regression analysis.

The dependent variables were then transformed into gender gap variables. As noted previously, gender is referenced when discussing the gender gap; however, the proper term is sex considering in the NIBRS data, sex is classified as males and females. The gap between the sexes was created by transforming crime rate variables into sex gap variables. The process involved taking a male crime rate and subtracting the female crime rate. If the crime rate variable were total crime the formula would look like this: total crime rate sex gap = male total crime rate - female total crime rate.

The independent variables utilized in this study focus on five places based on metropolitan places (Geographic Identifiers File of 2010 Census (file G001); American FactFinder, 2014). Metropolitan areas are said to have an urbanized area of 50,000 or more people. Micropolitan areas have an urban cluster of 10,000 to 50,000. Non-metropolitan areas fall outside of metropolitan and micropolitan regions. The five independent variables of place in this study are defined as metropolitan principal (largest city in a metropolitan area), micropolitan principal (largest city in a micropolitan area), metropolitan suburban (areas surrounding metropolitan principal cities), micropolitan suburban (area surrounding micropolitan principal cities), and non-metropolitan (rural areas outside of metropolitan and micropolitan communities).

Control Variables

Control variables were selected based on Census and American Community Survey five-year estimates for 2007-2011, known as the old census long form. Initial control variables included unemployment, income below 15k, single mother w/kids household, race (White, Hispanic, Black, Asian, Native American, Pacific Islander, Other), and age. Each of the control variables were run in a stepwise regression against each individual dependent crime victimization rate variable. The six control variables that had the most significance to the dependent variables were chosen for this study. The control variables ended up being Black, income below 15k, single mother w/kids household, ages 15-19, ages 25-44, ages 45-64, and ages 65-84. The control variables were transformed due to skewness, kurtosis, and heteroscedasticity. The final transformations are the log of Black race, square root of single mother household w/kids, square root of income below 15k, log of ages 15-19, square root of ages 25-44, and square root of ages 44-64. Ages 65 to 84 was symmetrical and did not need to be transformed. In this study the control variables are tested in the ordinary least squares regressions (OLS).

Analytic Strategy

Ordinary least squares regressions (OLS) and robust regressions were run using SPSS and Stata. Aggregate crime rates are prone to having heteroscedasticity and zero inflation due to certain areas not reporting crime (Osgood, 2000). The data used in this study did have heteroscedasticity but it was due to large cities such as Cleveland and Akron pulling the line, but it is not sufficient enough to change the substantive results. Running a robust regression with Stata helped the issue. This study will be biased against

rural areas that are served by a county sheriff's department and not a municipal department, given the NIBRS data used in this analysis only counts municipal police data. Table 1 is the *Descriptive Statistics*. Table 2 is *Regressions of Ohio Victimization Rates with Place and Controls Run Combined*. Table 3 is *Regressions of Ohio Victimization Rates with Place and Controls Run Separately*. Table 4 is *R^2 Regression Outputs for Violent Crime Victimization Rates*. Table 5 is *Regressions of Ohio Victimization Rates Gender Gap with Place and Controls Combined*. Table 6 is *Regressions of Ohio Victimization Rates Gender Gap with Place and Controls Run Separately*. Table 7 is *R^2 Regression Outputs for Violent Crime Victimization Rates by Gender Gap*.

Summary

NIBRS 2010 violent crimes victimization rates (total crime, murder, rape robbery, and aggravated assault) collected in Ohio were used for this study. The files were merged to Census Bureau and American FactFinder files. The five locations used as independent variables were taken from Census files and consist of metropolitan principal city, micropolitan principal city, metropolitan suburban, micropolitan suburban, and non-metropolitan. Control variables include Black, income below 15k, single mother w/kids household, and age variables. Sex (male and female) gaps were transformed from male and female NIBRS victimization data by subtracting male victimization rates from female victimization rates. Ordinary least squares regressions (OLS) and robust regressions were run using Stata and SPSS software. Each dependent variable (aloe then transformed to gender gap) was run individually with combined control and independent variables and then run separately to the control and independent variables. The results of the regression studies are explained in the next chapter.

Chapter IV

Results

Place

Through running an ordinary least squares regression (OLS) the strength of a relationship, direction of relationship and significance are known. Non-metropolitan places were the reference point for all regressions. Total crime (with place and control variables combined) is positively related to metropolitan principal cities (β=11.88, p<.001) and micropolitan principal cities (β=2.87, p<.05), though the relationship is not as significant and not as strong in micropolitan principal cities (Table 2). As for the control variables, total crime is positively associated to single mother household w/kids (β=2.81, p<.01), and black race (β=1.31, p<.001). When control variables and places are analyzed separately (Table 3), the relationship between total crime and metropolitan principal cities (β=17.20, p<.001) is still positive and significant and it is a stronger relationship. Total crime without control variables is less significant to micropolitan principal cities (β=3.42, p<.05) but the relationship is still positive and stronger. When the control variables are run in the regression alone, black race and single mother household w/kids remains about the same; however, now income below 15k (β=1.14, p<.01) is positively significant.

The murder victimization rate is positively related to metropolitan principal cities (β=2.33, p<.001) when the regression is run with place and control variables combined (Table 2). Murder is negatively related to metropolitan suburban places (β= -0.68, p<.01) and micropolitan suburban places (β=-0.93, p<.001). The only control variable of any significance is black race (β=0.14, p<.05) and the significance is slight. Taking away the

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control variables (Table 3), the murder victimization relationship remains about the same by being positively significant to metropolitan principal cities (β=2.94, p<.001) and negatively significant to both metropolitan suburban (β= -0.61, p<.05) and micropolitan suburban (β=-0.87, p<.01). Black race (β=0.30, p<.01) becomes more significant and income below 15k (β=0.26, p<.05) is now significant when place controls are taken away.

The rape victimization rate is not significant to any place variable when run combined with place and control variables. In fact, there is no significance to rape and any of the control variables in the combined regression. When control variables are removed (Table 3) and place is run in the regression alone, rape victimization is positively related to metropolitan principal cities (β=2.83, p<.05) and negatively associated with metropolitan suburban places (β= -1.51, p<.05).

Robbery victimization rates are positively related to metropolitan principal cities (β=9.30, p<.001), micropolitan principal cities (β=2.52, p<.05) and metropolitan suburban places (β=2.10, p<.05), when running the combined regression (Table 2). The control variables that are significant are black race (β=2.20, p<.001) and income below 15k (β=1.09, p<.01), both of which are positive relationships. Removing the control variables (Table 3), the relationship between robbery victimization is still positively related to metropolitan principal cities (β=17.17, p<.001), micropolitan principal cities (β=4.07, p<.01) and metropolitan suburban places (β=2.88, p<.01). Income below 15k (β=1.17, p<.001) is positively associated with robbery victimization and so too is black race (β=2.87, p<.001).

Aggravated assault victimization rates are positively significant to metropolitan principal cities ($\beta=9.00$, $p<.001$) and micropolitan principal cities ($\beta=3.40$, $p<.05$), when the regression combines place and control variables (Table 2). No control variables are positively significant to aggravated assault victimization rates. Taking away control variables (Table 3), aggravated assault victimization is positively significant to metropolitan principal cities ($\beta=10.99$, $p<.001$) and micropolitan principal cities ($\beta=3.42$, $p<.05$). Black race ($\beta=0.94$, $p<.01$) is positively significant to aggravated assault victimization rates when controls are run separate to place variables.

Gender Gap Regressions

Next the regressions were run against the gender (sex) gap dependent variables. When the sex gap is run in a combined regression (Table 5) with control variables and place variables, only metropolitan principal cities ($\beta=145.77$, $p<.001$) are associated with to total crime. The only significant control variable in the combined regression is black race ($\beta=21.49$, $p<.001$). Both of those significant relationships are strong positive relationships. Taking control variables away (Table 6), total crime and the sex gap are positively related to metropolitan principal cities ($\beta=212.04$, $p<.001$) and the relationship is strong. Income below 15k ($\beta=19.19$, $p<.01$) is now positive and significant in the separate regression analysis.

The sex gap of murder victimization is positively related to metropolitan principal cities ($\beta=6.38$, $p<.001$) when running the place regression combined with control variables (Table 5). No control variables are significant to murder victimization rates factoring in place. Once again, taking away the control variables (Table 6), murder victimization rate is about the same relationship wise with metropolitan principal cities

(β=7.47, p<.001) being positive and significant. Metropolitan suburban places are now negatively related (β= -2.24, p<.05) in the separated analysis. Race black (β=0.68, p<.05) becomes positive when run without place variables.

As noted previously, taking the sex gap of rape victimization is unnecessary given the 2010 NIBRS data only interprets rape as a crime against a women, but the variable was run in the regression anyway. There is no significance to place or control variables when the regressions are combined. Without control variables (Table 6) there is a negative relationship between the sex gap of rape and metropolitan principal (β= -20.41, p<.05). There is a positive relationship between metropolitan suburban (β=20.89, p<.01) and micropolitan suburban (β=18.34, p<.05). The relationship to single mother w/kids is negative (β= -14.99, p<.05).

The sex gap of robbery victimization run combined with control variables (Table 5) and place is positively associated with metropolitan principal cities (β=115.16, p<.001). Black race (β=15.89, p<.001) is the only significant control variable in this regression. When the control variables are removed (Table 6), the sex gap of robbery victimization is positively related to metropolitan principal cities (β=166.52, p<.001). When only control variables are run with robbery victimization, race black (β=23.29, p<.001) and income below 15k (β=8.34, p<.05) are both positively related.

There is no significance in the sex gap of aggravated assault victimization when combining place and control variables. Taking away control variables (Table 6), there is a positive relationship between the sex gap of aggravated assault victimization to metropolitan principal cities (β=57.57, p<.01). Income below 15k (β=11.88, p<.05) becomes positive when control variables are run separately in the regression.

Summary

      Metropolitan principal cities were positively related to all victimization crime rates other than rape in both combined place and control regressions and aggravated assault in the combined gender gap regression. Micropolitan principal cities had no significance to murder or rape when run in all four regressions, nor was there any significance in the gender gap regressions to any crime victimization rate. Micropolitan principal cities displayed stronger and more significant relationships to total crime, robbery and aggravated assault when place was run without control variables. Metropolitan suburban places are negatively associated with murder and rape and positively related to robbery when place is run separate to the control variables. Rape victimization is no longer significant to metropolitan suburban areas when control variables are added. The gender gap is negatively related to murder and positively related to rape in metropolitan areas only when place variables are run. Micropolitan suburban places are negatively associated with murder victimization when combined with place and control variables or alone to place variables. The gender gap is only significant in micropolitan suburban places when rape is run alone with place variables, and the relationship is positive.

Chapter V

Conclusion

Major Findings

As total crime victimization rates rise there is significance to the rise taking place in metropolitan principal cities and micropolitan principal cities. There is a significant sex gap between total crime victimization rates within metropolitan principal cities. The significance between total crime victimization and micropolitan principal cities vanishes when looking at the sex gap, indicating similar victimization rates for males and females. The murder victimization rate is higher in metropolitan principal cities with and without control variables. Metropolitan principal cities remain significant when including the sex gap. Metropolitan suburban places are positively related to murder victimization rates and to any sex gap therein. Murder victimization rates decrease within metropolitan and micropolitan suburban places. There is also a significant decrease in the sex gaps of murder victims in metropolitan principal cities.

Rape is significant to the variables of place when excluding control variables. As rape victimization increases, it is more likely to occur in metropolitan principal cities. As rape victimization decreases, the decrease is significantly tied to metropolitan suburban places. Those living in metropolitan principal cities, micropolitan principal cities, and metropolitan suburban places are the likeliest to have an increase in robbery victimization rates. When factoring in the sex gap, there is only an increase in those living in metropolitan principal cities. Aggravated assault victims are most likely to be victimized in metropolitan principal cities and micropolitan principal cities. The sex gap increases in metropolitan principal cities for aggravated assault victimization rates. This increase in

sex gap is only significant to place, when control variables are added the gap is no longer significant to aggravated assault.

Taking the R^2 value of the regression tables (see Table 4 & Table 7) helps determine the percent variance place counts for in this study. Place determines 12% of total crime victimization rates, 23% of murder victimization, 5% rape victimization, 7% robbery victimization, and 10% aggravated assault victimization (Table 4). When including the gender gap place accounts for 9% of total crime victimization, 12% murder victimization, 5% rape victimization, 13% robbery victimization, and 4% aggravated assault victimization (Table 7). Though these percentages are small they show place is a factor in victimization. The regressions demonstrated that significance varies depending on place, crime and gender.

It was hypothesized that principal cities and suburban places would share similar violent crime victimization significances due to the places sharing similar place traits. It was also hypothesized that place itself is a significant variable in crime victimization. The results indicate that principal cities (especially metropolitan) have the highest rates of violent crime overall. Metropolitan suburban places are positively related to robbery, but negatively significant to murder (as is micropolitan suburban) and rape. These results contradict the hypothesis that suburban and principal places sharing similar geographical traits means they would share similar victimization rates. However, the hypothesis that place is a significant factor in victimization is clearly supported by the results in this study. Violent crime victimization rates are tied to places and the R^2 regression results indicate place counts for a percentage of all violent crime victimization analyzed in this study.

As for sex of victims, it was hypothesized males would have stronger relationships to being victimized in principal cities compared to suburban, while females were expected to have stronger relationships to victimization in suburban areas compared to principal cities. The results show the gender gap of all dependents (excluding rape) is strongest in metropolitan principal cities, which could be the result of males being victimized at a higher rate as was hypothesized. The gender gap was negative in metropolitan suburban place in regards to murder, which may indicate females have a stronger likelihood of victimization there which would decrease the gender gap. Overall there is little significance in the gender gap regressions indicating micropolitan principal, metropolitan suburban, micropolitan suburban and non-metropolitan places share similar victimization rates between the sexes. The R^2 regressions indicate that place does account for a percentage of all the victimization rates based on sex of the victims; however, the percentage seems to be because of metropolitan principal cities having such significance to the gender gap. Next the limitations will be explained.

Limitations

The sex focus in this study of victims cannot be studied for every crime because the NIBRS dataset finds several crimes to be victimless. To overcome the missing data from victimless crimes, this study focuses on violent crimes in which the victims are known. The focus on violent crimes only means that this is not a complete crime study. Another possible problem with this study is that every offense in a given crime is reported. Therefore, if one offender committed several offenses at once, all offenses are counted and it looks as if different offenders and victims were involved in each separate offense. The same victims of several different offenses will be listed as if they were a

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separate victim per offense. For instance, if the same victim were robbed and murdered they would be counted as two different people, the person who was robbed and the person who was murdered. Or the police in this instance of a person who was robbed and murdered might only count the highest offense (murder). Also, the data does not show if the offenses were committed on the same victim, so there is no way of knowing when this is occurring. Each offense will be counted as a separate offense, and any misrepresentation it brings to a particular victim will still be included for the sake of this study.

In some cases the police or agency who reported the crime statistics may have excluded the minor offenses and only listed what was deemed most serious. This could result in inaccuracy in the crime data and missing data. Some of the statistics or percentages may be high for a particular variable if that variable has a much larger sample population than the variable it is being compared to. For instance, the category of rape in this study is disproportionally high for female victims. Though the NIBRS definition of rape today includes males being victims, the 2010 NIBRS data used in this study counts rape as only being a crime against females. NIBRS 2010 defines rape as "the carnal knowledge of a female forcibly and against her will," (Reese, 2013). This means that the significance of sex and rape is irrelevant in this study because males were excluded from the results; however, rape was still chosen as a variable because of how it pertains to place and female rape victims within places.

The geographic regions used in this study were determined based on the localities that turned in criminal data to NIBRS and will relate to American Fact-finder and the 2010 census classification of metropolitan principal, micropolitan principal, metropolitan

suburban, micropolitan suburban, and non-metropolitan. Only municipal police department's data is used in this analysis. Not all localities turn in their crime statistics, and focuses on particular places could be misleading if not enough police municipalities turned in information. There will be slight bias in this study due to the fact that rural areas are not represented completely if they don't have municipal police departments and instead have Sheriff's departments. The findings in this study should not be generalizable to areas outside of Ohio because this is strictly an Ohio study. Even if the results turn up statistics that are not significant, they are still included in the study.

Contributions and Future Recommendations

This study contributes to the field of ecological analysis in regards to crime rates. It shows there is significance to place, specifically the place variables chosen in this study, and more emphasis needs to be focused on place variables over individual variables. According to these results place is a significant factor in many violent crimes, and place accounts for a percentage of all of the violent victimization rates and gender gaped victimization rates analyzed in this study. This contributes to the field of place studies. This study also contributes to the importance of analyzing crime by place and sex. The R^2 regressions show significance to gender gaps and all place variables. The OLS regressions themselves showed a lack of significance in gender gaps outside of metropolitan principal cities indicating males and females may share similar victimization rates outside of principal cities.

It is recommended that future studies on crime and place include variables that are only specific to places, and not people. This study attempted to do that by showing significance with individual variables and removing individual variables for comparison

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but could have shown different results if only place variables were used. It is also recommended that offender statistics be included in a similar study to see if there are differences between offender and victim statistics based on place and gender. A future study could use male and female percentages instead of gender gaps to better pinpoint where the similarities and differences exist between the sexes. The NIBRS data chosen for this study only included Ohio statistics; a future study in this area should represent America. By representing data that has been collected across America, a study would not only have a much larger basis of analysis that results could be based upon but it would also be acceptable if the results were then generalized to a greater degree.

Summary

The hypothesis was that metro/micro principal cities and metro/micro suburban places would share similar crime rates. The results indicate that metropolitan principal cities have the most significance to violent crimes based on the Ohio data set and regression analysis. Rape in the combined regression is the only non-significant victimization variable to metropolitan principal cities when combined with control variables. Micropolitan principal cities are positively significant when looking at total crime, robbery and aggravated assault. In the combined regression metropolitan suburban places are negatively significant to murder and positively significant to robbery. When place is run alone metropolitan is significantly negative to rape. The place hypothesis was not entirely true to the exact places as hypothesized; however, place is a significant factor and the R^2 shows the variance percent is worthy of future explorations.

The sex gap was hypothesized to be greater for males being victimized in metropolitan and micropolitan principal cities, and the gap was expected to decrease

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indicating females having higher likelihoods of being victimized in metropolitan and micropolitan suburban places. The results indicate the sex gap combined regression only shows sex gap significances in metropolitan principal cities for total crime, murder and robbery. The sex gap in the separate place regression shows positive relationships to sex in metropolitan places for four of the victimization rates. The sex gap of rape is negatively associated with metropolitan places. The murder sex gap is negatively related to metropolitan suburban while the rape sex gap is positively related to metropolitan and micropolitan suburban. The R^2 results for sex gaps indicate there is less of a percentage explained by place and sex gap victimization rates as there is by place and victimization rates. However, place does count for a percentage of the sex gaps.

The results of this study indicate that overall, place, gender and violent crime victimization rates in Ohio are important factors amongst one another and should be included in crime rate studies. This study contributes to place focused crime research by showing significance to Census defined metropolitan places. Future studies in this area should focus on more place variables to run along with regressions and crime variables. Age variables were used in this study because they showed significance alone to the crime rates used in the study; however, no age variables showed any significance in the regression run for this analysis. Stark's emphasis on urban traits is justified by principal cities in this study indicating highest significance to victimization; however, the place analysis in this study has also shown many of Stark's (1987) urban traits can be found in non-urban places. Future studies in this filed should look into more violent crimes or even property crimes. It is also recommended that future studies analyze data representing the entire nation instead of just one state.

References

American FactFinder. (2014). *American FactFinder*. Retrieved, from

    http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml

Barnes, J., & Beaver, K. (2012). Extending research on the victim offender overlap:

    Evidence from a genetically informative analysis. *Journal of Interpersonal*

    Violence, *27,* 3299-3321.

Barnett, C., & Mencken, F. C. (2002). Social disorganization theory and the contextual

    nature of crime in nonmetropolitan countries. *Rural Sociology*, *67*(3), 372-393.

Bursik, R. J. (1988). Social disorganization and theories of crime and delinquency:

    Problems and prospects, *Criminology*, *26*(4), 519-552.

Caniglia, J. (2014, April 02). Ohio moving atop the nation's list of seized meth labs,

    report says. *The Plain Dealer*. Retrieved, from

    http://www.cleveland.com/metro/index.ssf/2014/04/ohio_moving_atop_the_natio

    ns_l.html

Cohen, A. (1955). *Delinquent boys: The culture of the gang*. New York, NY: Free Press.

Dobrin, A., Lee, D., & Price, J. (2005). Neighborhood structure differences between

    homicide victims and non-victims. *Journal of Criminal Justice*, *33*(2), 137-143.

Donnermeyer, J. F., & DeKeseredy, W. (2008). Toward a rural critical criminology.

    Southern Rural Sociology, *23*(2), 4-28.

Eck, J., & Weisburd, D. (1995). *Crime prevention studies.* (Vol. 4). Monsey, NY: Willow

    Tree Press, Inc.

Estrada, F., & Nilsson, A. (2012). Does it cost more to be a female offender? A life course study of childhood circumstances, crime, drug abuse, and living conditions. *Feminist Criminology*, *7*(3), 196-219.

FBI releases annual crime statistics from the national incident-based reporting system. (2013, December 09). Retrieved from http://www.fbi.gov/news/pressrel/press-releases/fbi-releases-annual-crime-statistics-from-the-national-incident-based-reporting-system

Gaines, L., & Kraska, P. (2003). *Drugs, crime, & justice*. (2nd ed.). Long Grove, IL: Waveland Press, Inc.

Gender. (2014). In *Merriam-Webster online.* Retrieved from http://www.merriam-webster.com/dictionary/gender

Geographic Identifiers File of 2010 Census. (2014). American FactFinder, (file G001).

Glossary of statistical terms. (n.d.). *Statistics.com*. Retrieved from http://www.statistics.com/glossary&term_id=326

Grossman, S. F., Hinkley, S., Kawalski, A., & Margrave, C. (2005). Rural versus urban victims of violence: The interplay. *Journal of Family Violence*, *20*(2), 71-81.

Gruenewald, P.J., Freisthler, B., Remer, L., LaScala, E. A., & Treno, A. (2006) Ecological models of alcohol outlets and violent assaults: crime potentials and geospatial analysis, *Addiction*, *101*(5), 666-677.

Hadac, T. (2012, November 23). There's plenty of crime in the suburbs. *Southwest Chicago Post*. Retrieved from http://www.swchicagopost.com/2012/11/theres-plenty-of-crime-in-suburbs.htmlfor

Hipp, J. R. (2013). Assessing crime as a problem: The relationship between residents'
  perception of crime and official crime rates over 25 years. *Crime & Delinquency*,
  59(4), 616-648.

Hotakainen, R. (2013, May 23). *Marijuana is drug most often linked to crime, study
  finds*. Retrieved from
  http://www.mcclatchydc.com/2013/05/23/192101/marijuana-is-drug-most-often-
  linked.html

Jones, R. W., & Pridemore, W.A., (2012). The foreclosure crisis and crime: Is housing-
  mortgage stress associated with violent and property crime in U.S. metropolitan
  areas? *Social Science Quarterly*, *93*(3), 671-6.

King, M. (2013). "Broken windows," urban policing, and the social contexts of race and
  neighborhood (dis-)empowerment. *Critical Criminology*, *21*(4), 533-538.

Kruttscnitt, C. (1996). Contributions of quantitative methods to the study of gender and
  crime, or bootstrapping our way into the theoretical thicket. *Journal of
  Quantitative Criminology*, *12*(2), 135-161.

Kubrin, C. E., & Weitzer, R. (2003). New directions in social disorganization theory.
  Journal of Research in Crime and Delinquency, *40*(4), 374-402.

Law Enforcement Agency Identifiers Crosswalk [United States], 2005 (ICPSR 4634).

Lauritsen, J. L., & Carbone-Lopez, K. (2011). Gender differences in risk factors for
  violent victimization: An examination of individual-, family-, and community-
  level predictors. *Journal of Research in Crime and Delinquency*, *48*(4), 538-565.

Lee, M. R. (2006). The religious institutional base and violent crime in rural areas.
  Journal for the Scientific Study of Religion, *45*(3), 309-324.

Leverentz, A. (2012). Narratives of crime and criminals: How places socially construct the crime problem. *Sociological Forum*, *27*(2), 348-371.

Lyman, M., & Potter, G. (2003). *Drugs in society causes, concepts, and control*. (4th ed.). Cincinnati, OH: Anderson Publishing Company.

Mears, D. P., Mancini, C., & Stewart, E. A. (2009). Whites' concern about crime: The effects of interracial contact. *Journal of Research in Crime and Delinquency*, *46*(4), 524-552.

Murray, R. (2012, June 20). Heroin use among suburban teens skyrockets; experts say prescription pills are the new gateway drug. *NY Daily News*. Retrieved from http://www.nydailynews.com/life-style/health/heroin-soars-suburban-teens-talk-heroin-problem-talking-prescription-drug-problem-article-1.1099140

Ohio Criminal Justice Statistics. (2010). *Office of Criminal Justice Services* [PDF document]. Retrieved, from http://www.publicsafety.ohio.gov/links/ocjs_Statistics.pdf

Osgood, D. W. (2000). Poisson-based regression analysis of aggregate crime rates. *Journal of Quantitative Criminology*, *16*(1), 21-43.

Osgood, D.W., & Chambers, J.M. (2000). Social disorganization outside the metropolis: An analysis of rural youth violence. *Criminology*, *38*(1), 81-116.

Ratcliffe, M. (2010). *Understanding "place" in census bureau data products* [PDF document]. Retrieved from https://www.census.gov/developers/geo/understandingplace.pdf

Reese, M. P. (2013, May 20). Frequently Asked Questions about the Change in the UCR Definition of Rape. *fbi.gov*. Retrieved from http://www.fbi.gov/about-

us/cjis/ucr/recent-program-updates/new-rape-definition-frequently-asked-
questions

Rogers, A. (2012, December 31). As cities get safer, America's suburbs get deadlier,
Business Insider. Retrieved from http://www.businessinsider.com/homicides-on-
the-rise-in-suburbs-2012-12.

Ross, A. (2012). Crime, police, and truth-in-sentencing: The impact of state sentencing
policy on local communities. *Regional Science and Urban Economics*, *42*(1-2),
144-152.

Schmitt, A. (2013, January 10). Violent crime up in the suburbs, down in big cities.
Streetsblog US [Web log comment]. Retrieved from
http://dc.streetsblog.org/2013/01/10/violent-crime-up-in-the-suburbs-down-in-
big-cities/

Shaw, C. R., & McKay, H. D. (1942). *Juvenile delinquency and urban areas*. Chicago,
IL: University of Chicago Press.

Sipes, L. (2012, February 06). *Statistics on women offenders*. Retrieved from
http://www.corrections.com/news/article/30166-statistics-on-women-offenders

Spencer, G., & Bryant, S. (2000). Dating violence: A comparison of rural, suburban, and
urban teens. *Journal of Adolescent Health*, *27*, 302-305.

Stark, R. (1987). Deviant places: A theory of the ecology of crime. *Criminology*, *25*(4),
893-910.

Steffensmeier, D. (1993). National trends in female arrests, 1960-1990: Assessment and
recommendations for research. *Journal of Quantitative Criminology*, *9*(4), 411-
441.

Steffensmeier, D., & Allan, E. (1996). Gender and crime: Toward a gendered theory of female Offending. *Annual Review of Sociology*, *22*(1), 459-487.

Steffensmeier, D., Schwartz, J., Zhong, H., & Ackerman, J. (2005). An assessment of recent trends in girls' violence using diverse longitudinal sources: Is the gender gap closing?. *Criminology*, *43*(2), 355-406.

Truman, J., Langton, L., & Planty, M. (2013, October 1). *Criminal Victimization, 2012 [PDF document]*. Retrieved from U.S. Department of Justice online website: http://www.bjs.gov/content/pub/pdf/cv12.pdf

Truman, J. (2011, September). *Criminal victimization, 2010* [PDF document]. Retrieved from http://www.bjs.gov/content/pub/pdf/cv10.pdf

Uniform Crime Reporting Statistics: Their Proper Use. (2011, January 1). Retrieved from http://www.fbi.gov/about-us/cjis/ucr/ucr-statistics-their-proper-use

Wells, L. E., & Weisheit, R. A. (2004). Patterns of rural and urban crime: A county-level comparison. *Criminal Justice Review, 29*(1), 1-22.

Schwartz, J., & Gertseva, A. (2010). Stability and change in female and male violence across rural and urban counties, 1981–2006. *Rural Sociology*, *75*(3), 388-425.

Weisburd, D., Groff, E. R., & Yang, SM. (2014). Understanding and controlling hot spots of crime: The importance of formal and informal social controls. *Prevention Science*, *15*(1), 31-43.

Table 1

Descriptive Statistics

Variables	Mean	Standard Error	Standard Deviation

Dependent			
Total Crime	11.50	0.42	6.13
Murder	0.52	0.52	1.29
Rape	4.13	0.23	3.45
Robbery	5.11	0.39	5.73
Agg. Assault	7.23	0.36	5.32
Controls			
Race-Black	0.74	0.11	1.58
Income<15k	3.80	0.07	1.07
Single Mom W/C	2.83	0.31	0.46
Age 15-19	1.94	0.01	0.20
Age 25-44	4.96	0.02	0.33
Age 45-64	5.13	0.02	0.34
Age 65-84	12.95	0.19	2.82

Note (n=217)

Table 2

Regressions of Ohio Victimization Rates with Place and Controls Run Combined

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Variables	Total Crime	Murder	Rape	Robbery	Agg. Assault
	β	β	β	β	β

Place					
Non-metropolitan	0.0	0.0	0.0	0.0	0.0
Metropolitan Principal	11.88***	2.33***	2.02	9.30***	9.00***
Micropolitan Principal	2.87*	0.15	0.64	2.52*	3.40*
Metropolitan Suburban	0.71	-0.68*	-1.28	2.10*	0.62
Micropolitan Suburban	0.75	-0.93**	-1.24	0.76	1.40
Controls					
Race-Black	1.31***	0.14*	0.22	2.20***	0.44
Income <15k	0.66	0.14	-0.13	1.09**	0.09
Single Mom W/C	2.81**	0.10	0.85	0.95	1.81
Age-15-19	1.37	0.26	-0.23	-0.10	1.23
Age25-44	1.80	0.27	0.55	1.12	1.48
Age 45-64	-0.20	0.46	-1.53	0.61	0.89
Age 65-84	0.21	0.01	0.07	-0.07	0.24
Intercept	-15.08	-4.32	7.43	-13.90	-13.87
R^2	0.51***	0.41***	0.14***	0.61***	0.24***

Note: *p<.05   **p<.01   ***p<.001

Table 3

Regressions of Ohio Victimization Rates with Place and Controls Run Separately

----

Variables	Total Crime	Murder	Rape	Robbery	Agg. Assault
	β	β	β	β	β

Place					
Non-metropolitan	0.0	0.0	0.0	0.0	0.0
Metropolitan Principal	17.20***	2.94***	2.83*	17.17***	10.99***
Micropolitan Principal	3.42**	0.22	0.75	4.07**	3.42*
Metropolitan Suburban	0.38	-0.61*	-1.51*	2.88**	0.45
Micropolitan Suburban	0.52	-0.87**	-1.46	0.72	1.33
Intercept	10.10***	0.87***	5.09***	2.08*	5.95***
R^2	0.34***	0.37***	0.10***	0.34***	0.19***
Controls					
Race-Black	2.03***	0.30***	0.36	2.87***	0.94**
Income <15k	1.14**	0.26*	0.07	1.17***	0.56
Single Mom W/C	2.80**	0.21	1.01	0.84	1.74
Age-15-19	2.61	0.02	-0.85	1.30	2.24
Age25-44	2.94	0.18	0.20	2.19	2.37
Age 45-64	0.22	0.32	-1.93*	1.18	0.41
Age 65-84	0.22	-0.01	0.04	-0.05	0.25
Intercept	-26.60	-3.90	10.59	-23.75	-22.31
R^2	0.39***	0.18***	0.09	0.54***	0.14***

Note: *p<.05   **p<.01   ***p<.001

Table 4

R² Regression Outputs for Violent Crime Victimization Rates

Variable	Controls R^2	Place Added R^2	Change R^2
Total Crime	0.39	0.50	0.12
Murder	0.18	0.41	0.23
Rape	0.09	0.14	0.05
Robbery	0.54	0.61	0.07
Agg. Assault	0.14	0.24	0.10

Table 5

Regressions of Ohio Victimization Rates Gender Gap with Place and Controls Combined

----

Variables	Total Crime	Murder	Rape	Robbery	Agg. Assault
	β	β	β	β	β

Variables	Total Crime	Murder	Rape	Robbery	Agg. Assault
Place					
Non-metropolitan	0.0	0.0	0.0	0.0	0.0
Metropolitan Principal	145.77***	6.38**	-17.00	115.16***	40.89
Micropolitan Principal	-18.27	-2.69	2.44	10.92	-29.25
Metropolitan Suburban	13.18	-2.40	15.30	13.21	-13.23
Micropolitan Suburban	15.47	-2.13	16.09	5.56	-4.11
Controls					
Race-Black	21.49***	0.32	0.25	15.89***	4.82
Income <15k	14.22	-0.09	0.30	5.44	8.38
Single Mom W/C	-13.67	0.98	-13.85	8.63	-9.99
Age-15-19	-45.73	-2.01	-0.48	-28.90	-13.18
Age25-44	-11.51	-1.67	-1.10	-4.80	-3.83
Age 45-64	1.33	0.42	10.05	-7.66	-1.25
Age 65-84	-3.21	-0.12	-0.14	-0.75	-2.17
Intercept	138.63	11.19	-46.45	71.84	98.03
R^2	0.29***	0.19***	0.14***	0.52***	0.09*

Note: *p<.05   **p<.01   ***p<.001

Table 6

Regressions of Ohio Victimization Rates Gender Gap with Place and Controls Run Separately

----

Variables	Total Crime β	Murder β	Rape β	Robbery β	Agg. Assault β
Place					
Non-metropolitan	0.0	0.0	0.0	0.0	0.0
Metropolitan Principal	212.04***	7.47**	-20.41*	166.52***	57.57*
Micropolitan Principal	-2.66	-2.54	3.79	20.96	-25.27
Metropolitan Suburban	20.75	-2.24*	20.89**	17.01	-15.17
Micropolitan Suburban	14.00	-2.33	18.34*	2.27	-4.29
Intercept	-11.47***	2.33*	-42.50***	0.71	27.98*
R^2	0.21***	0.18***	0.10***	0.37***	0.07**
Controls					
Race-Black	29.60***	0.68*	-0.95	23.29***	6.34
Income <15k	19.19**	0.37	-1.56	8.34*	11.88*
Single Mom W/C	-14.20	1.29	-14.99*	8.32	-8.59
Age-15-19	-18.39	-2.17	6.39	-12.84	-8.66
Age25-44	13.58	-1.34	2.57	9.37	3.05
Age 45-64	17.57	0.54	13.58	0.26	3.39
Age 65-84	-2.63	-0.14	0.16	-0.57	-2.06
Intercept	104.49	4.71	-74.91	-75.81	1.57
R^2	0.21***	0.07*	0.09**	0.39***	0.05

Note: *$p<.05$ **$p<.01$ ***$p<.001$

Table 7

R² Regression Outputs for Violent Crime Victimization Rates by Gender Gap

----

Variable	Controls R^2	Place Added R^2	Change R^2
Total Crime	0.21	0.29	0.09
Murder	0.07	0.19	0.12
Rape	0.09	0.14	0.05
Robbery	0.39	0.52	0.13
Agg. Assault	0.05	0.09	0.04

Appendix A

Institutional Review Board of Youngstown State University Approval Letter

Youngstown
STATE UNIVERSITY

One University Plaza, Youngstown, Ohio 44555

Office of Grants and Sponsored Programs
330.941.2377
Fax 330.941.2705

April 10, 2014

Dr. Richard Rogers, Principal Investigator
Ms. Kristin Helle, Co-investigator
Department of Criminal Justice and Forensic Sciences
UNIVERSITY

RE: HSRC PROTOCOL NUMBER: 146-2014
        TITLE: Gender Based Crime Study: The Comparisons and Differences between Regions and Crime Rates
        in Ohio

Dear Dr. Rogers and Ms. Helle:

The Institutional Review Board of Youngstown State University has reviewed the aforementioned protocol, and has determined it is exempt from full committee review based on a DHHS Category 5 exemption, *subject to the following conditions:*

> (1) *You will not merge public use data files or enhance a public use data file with identifiable or potentially identifiable data;*
> (2) *You will use the public use datasets solely for statistical analysis and reporting of aggregated information and not for investigation of specific individuals or organizations;*
> (3) *You will not make use of the identity of any person or establishment discovered inadvertently and will advise the YSU IRB of any such discovery.*

Any changes in your research activity should be promptly reported to the IRB and may not be initiated without IRB approval except where necessary to eliminate hazard to human subjects. Any unanticipated problems involving risks to subjects should also be promptly reported to the IRB.

Sincerely,

Dr. Scott Martin
Interim Associate Dean for Research
Authorized Institutional Official

SCM/cc

c: Atty. Patricia Wagner, Chair
       Department of Criminal Justice and Forensic Sciences

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