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## **Impact of High Profile Police Use of Force Incidents on Violent Crime Rates**

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UNIVERSITY OF NEW HAVEN  
HONORS PROGRAM

**2019-2020 Honors Thesis**

Impact of High Profile Police Use of Force Incidents on  
Violent Crime Rates

Megan Galante

A thesis presented in partial fulfillment of the requirements of the Undergraduate Honors Program at the University of New Haven.

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## Impact of High Profile Police Use of Force Incidents on Violent Crime Rates

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### **Thesis Statement**

The theory of de-policing states that incidents of police use of force and extensive media coverage of these events have caused the police to take a step back from active policing. Based on the theory of de-policing it is hypothesized that there will have been a change in the rate of violent crime in cities where high profile incidents of police use of force have occurred. This change in the rate of crime has been called the Ferguson Effect. My study examined whether or not there has been a statistically significant increase in violent crime following police use of force incidents. I hypothesized that the instances of police excessive use of force will result in higher levels of violent crime.

### **Abstract**

This research study examined the relationship between high-profile police use of force incidents and local violent crime rates. It is important to analyze the impact that police use of force has on the respective community in regard to crime rates. This study analyzed three incidents of police use of force that have received extensive coverage in the media in order to determine if there was a change in the rates of violent crime in that city. The theory of de-policing suggests that in the aftermath of a high-profile incident of police brutality, police departments in the area change their behaviors in response to the incident. The theory explains that police officers will retreat from their work in an attempt to avoid being a part of a controversial situation regarding police misconduct. Part of this theory includes that this behavior by police officers is in part due to the high levels of scrutiny that the media puts onto police officers following controversial incidents. Based on this theory, this research study looked to examine whether or not the change in policing behaviors following high profile incidents impacts the rates of violent crime in the specific area where the incident occurred. The results of this study indicate that there was no statistically significant change in the violent crime rates for the cities during the three year span.

*Keywords:* de-policing, police use of force, crime rates, Ferguson Effect

### **Introduction**

Undoubtedly, the number of police use of force incidents in the media over the past years has raised concerns regarding the potential impact these events have on police behavior and crime rates. Some researchers have gone further to state that there needs to be policy changes to prevent police from abusing their power (White, 2016). White (2016) discusses the need for a national police deadly force database to keep detailed records of these incidents and observe trends. The main reasons White advocates for a national database is because fully understanding the connection between citizen violence against the police and police violence against citizens can lead to a reduction in the prevalence of both. Therefore, research regarding police use of force incidents is important because it highlights trends and violence in today's society that should be monitored.

### **The Ferguson Effect**

Since the 2014 shooting of Michael Brown in Ferguson, Missouri, there have been similar incidents reported in the media across the U.S. Rosenfeld (2015) conducted a study to test for what is known as the "Ferguson Effect" on crime rates in major cities in the United States. The Ferguson Effect suggests that the publicity surrounding the shooting of Michael Brown led to a rise in violent crime in several U.S cities. One theory regarding why the events of Ferguson would lead to increased crime rates is based on the influence that social media has on today's society. Particularly, his study sought to determine whether or not

there was an effect on crime in St. Louis, Missouri by examining the crime rates in the city in the months before and after the shooting of Michael Brown. He found that violent crime in St. Louis increased by 5.3% in 2014, with the homicide rate, in particular, increasing by 32.5%. Many people have attributed this change to the shooting of Michael Brown and the Ferguson Effect. However, Rosenfeld conducted research to determine if the increases occurred before or after the Ferguson shooting. Through close examination of the homicide rates in 2014 in St. Louis, Rosenfeld determined that the rates increased in the months prior to the shooting of Michael Brown, and showed no significant changes in the months after the shooting, thus showing no support for the Ferguson Effect. However, when examining violent crime rates overall, there were observable increases in the data for the months after the Ferguson shooting. In conclusion, Rosenfeld states that the increases in violent crime in St. Louis post Ferguson should not be discounted as random fluctuations. While this is not sufficient support for a Ferguson Effect, Rosenfeld notes that it is important to keep track of these crime trends for future study.

Furthermore, Pyrooz, Decker, Wolfe, and Shjarback (2016) sought to determine whether or not there was a Ferguson Effect on crime, as well. Pyrooz et al. state that high-profile incidents like Ferguson may convey to society that justice is not being administered fairly. They state that a response to this belief that the law is not being administered fairly is increased participation in crime,



thus leading to a rise in national crime rates. Pyrooz et al. examined official crime data from police departments in 81 of the 105 United States' cities with populations exceeding 200,000 persons in the year 2010. They focused on the rates of violent crime and property crime in the 12 months before and the 12 months after the Ferguson shooting. Pyrooz et al. found that crime rates were declining in the year prior to Ferguson, which is consistent with a long-term decline of crime rates in the United States. This research questioned whether or not there was a systematic change in crime trends, and their results were statistically insignificant. Thus, Pyrooz et al. found no evidence to suggest that there is a Ferguson Effect on crime rates in large U.S. cities.

#### **Effects of Negative Police Publicity**

Researchers Shjarback, Pyrooz, Wolfe and Decker (2017) conducted another study where they analyzed the changes in quantity and quality of policing among Missouri police departments following the Ferguson shooting of Michael Brown in 2014. Their research is based on the speculation that police officers are “de-policing,” or retreating from their work as a response to the animosity towards police departments across the United States. The de-policing theory suggests that police officers are changing their behaviors in an attempt to avoid controversies regarding police misconduct. The Ferguson Effect suggests that as a result of de-policing efforts, violent crime will rise.

In order to conduct their research, Shjarback et al. (2017) assessed the extent to which de-policing occurred among 118 police departments in Missouri. They examined the changes in quantity, meaning the standardized rates of traffic/vehicle stops, searches and arrests, and the quality, meaning the rates at which contraband was found by police from 2014 to 2015. Additionally, they examined whether jurisdictions with larger percentages of African American residents are more prone to de-policing. Lastly, the researchers looked at whether or not any de-policing behavior was associated with changes in the crime rate across the police departments in Missouri. They hypothesized that de-policing behavior would lead to increases in crime rates. The data used in this study were pulled from agency-specific vehicle/traffic stop reports from the state of Missouri for 2014 and 2015, the FBI's Uniform Crime Reports for 2014 and 2015, and 2014 estimates from the United States Census Bureau's American Community Survey.

As a result of their research, Shjarback et al. (2017) observed a reduction in the number of stops performed by Missouri police departments, which was nearly 67,000 fewer stops among the agencies in 2015 than in 2014. However, Shjarback et al. note that the reduction in the number of stops did not correspond with a reduction in searches or arrests among the same agencies. Furthermore, they found that violent crime increased by 0.12 standard deviations between 2014 and 2015, while overall crime and property crime remained unchanged. Their

results suggest mixed evidence of the de-policing effect. Shjarback et al. also observed increases in hit rates, showing that officers were more successful at finding contraband during their stops. Overall, the results showed that among the police departments in Missouri, departments made fewer vehicle stops, searches and arrests in 2015 than in 2014 in jurisdictions with a larger African-American population. Ultimately, this study yielded no relationship between de-policing and crime rates in the observed years.

Shane, Lawton, and Swenson (2017) examined fatal police shootings by United States police through 2015-2016 as a response to the Black Lives Matter movement. They looked at reports of police fatalities in the United States offered by databases, such as Killed by Police and Fatal Encounters, from January 2, 2015 to December 29, 2016. Shane et al. examined which United States cities presented the greatest risk of a police shooting fatality, how the mean rate of police shooting fatalities varies across the country, and if the rate varies by race when looking at state racial composition.

Shane et al. (2017) found that per 100,000 population, New Mexico had the highest mean rate of police shooting fatalities at 1.97, while Connecticut (0.17), New York (0.18) and Rhode Island (0.19) had the lowest mean rates. The national mean fatality rate, comprising all 50 states and Washington, D.C. is 0.686. Overall, they found that at the city level, major U.S. cities presented the greatest risk of a police shooting fatality. These results show that the rates of

police shootings are greater in cities with higher populations, meaning that increases in crime rates for these cities may not be due to a Ferguson Effect, but rather changes in population.

Shane et al. (2017) conclude that their findings suggest that the public has a misconception regarding police use of fatal force. According to their research, there is not an increasing trend in fatal police shootings. Although their results show that there are higher rates for Blacks in fatal encounters, Shane et al. state that the findings fail to account for characteristics of the incident. Ultimately, they found that the data do not support the message that the public conveys through the media that there is an increasing number of fatal police shootings disproportionately targeting Blacks.

### **Officers' Perception of the Ferguson Effect**

Rather than focusing on the effect this "Ferguson Effect" can have on crime rates, Nix and Pickett (2017) examined how negative police publicity can affect both civilians' and officers' behaviors and perceptions. Policing in the United States has faced strict scrutiny over the past several years due to high profile, deadly force incidents, mainly involving Black civilians. While the media coverage and negative publicity regarding the police may or may not affect the crime rates in the cities where these events have occurred, negative publicity for the police may influence civilians', as well as, officers' perceptions and

behaviors. Nix and Pickett suggest that negative police publicity may affect officer morale, thus creating an “us versus them” ideology among officers.

In order to study the effects of negative police publicity, Nix and Pickett (2017) used third-person perceptions, in which they question police officers about the effect that media reports regarding the police have on civilians’ attitudes and behaviors. Nix and Pickett hypothesized that when asked, police officers would state that the media reports regarding policing strongly affect civilians’ attitudes and behaviors. These third-person perceptions are presumed to reflect the officers’ own beliefs regarding the media reports. Additionally, Nix and Pickett hypothesized that police officers’ hostile media perceptions will lead them to endorse the belief that crime is rising in their city.

Nix and Pickett (2017) conducted their research by collecting data from a survey of a large police department in a major city in the southeastern United States during the fall of 2016. All 1247 sworn officers were invited to participate in this study, of which 251 officers completed the survey. The questions that were asked included how negative media coverage of the police impacts crime rates and officers’ fear of false allegations against them. The results showed that the majority of officers in the sample reported that unfavorable media coverage of the police does increase the crime rate, 27.2% stating that it greatly increases and 55.8% stating that it increases, thus showing a belief in the Ferguson effect. None of the officers reported that the media coverage decreases crime. Furthermore,

Nix and Pickett found that officers are more likely to be apprehensive of false allegations against them if they believe that the media coverage of the police has been increasingly hostile over the past few years. Ultimately, whether the Ferguson effect is a real phenomenon or not, Nix and Pickett's research has shown that police officers believe in the effect, thus it has a real impact on them and how they perceive their work.

Nix, Wolfe, and Campbell (2017) are also among researchers who seek to examine the effects of police officers' perceptions of the "War on Cops", as well as the theory of de-policing. In their research, Nix et al. collected data from a sample of 210 command-level police officers who attended a training session by a criminal justice training academy in the United States, taken in October 2016. The study captured participants' attitudes and beliefs about officers withdrawing from their work.

Ultimately, Nix et al. (2017) found that on average, respondents agreed that citizens have become less compliant and more resistant towards the police within the last two years of when their data were collected. Furthermore, those officers who believed that their community legitimized the police were less inclined to state that de-policing occurs in their department. On the other hand, officers that felt as though the community was noncompliant tended to report that de-policing did occur in their department. Overall, these results supported Nix et

al.'s hypothesis but did not provide definitive evidence that the so-called "war on cops" leads to de-policing.

Furthermore, Blake and Lafond (2017) sought to explore the effects that media and leadership have on police officer's enforcement of discretion. Media is undoubtedly a factor that should be considered when examining high profile incidents such as police shootings. Blake and Lafond studied 489 law enforcement patrol officers across the United States ranging in age and years of experience on the job. The study was conducted through a survey of 19 questions focusing on social trends and media influencing patrol-level officers.

The purpose of the study by Blake and Lafond (2017) was to examine police officers' perceptions and attitudes about the portrayal of the police by the media. Blake and Lafond also looked at the perception of law enforcement regarding their views of proactive policing. The results showed that law enforcement officers shared a pessimistic view of the public's perception of law enforcement officers. Additionally, the majority of law enforcement officers (74.7%) thought that the media represented the police in a negative light. Furthermore, 58.1% of respondents reported that they had reduced or stopped their proactivity due to the media depiction of police officers and agencies. In regard to how the media perceives the police, nearly all of the respondents felt as though the media was extremely biased towards the police in a negative manner. Overall, Blake and Lafond determined that there was a significant relationship

between the influence of the media on the respondents and their proactivity in policing.

Wolfe and Nix (2016) conducted research on how the “Ferguson Effect” impacts the police’s willingness to engage in activities with the community. Similar to other research on the topic, Wolfe and Nix observed the public response to high profile police use of force events, in particular, Ferguson. In order to further explore the theory of de-policing and the Ferguson Effect, Wolfe and Nix examined how willing police officers are to engage in community partnership. One variable studied in this research is officer’s perceptions of organizational justice. Wolfe and Nix found that employees who believe their supervisor or organization is fair are more likely to be productive and engaged in their work. A second variable that could potentially impact officer’s willingness to participate in community partnership is the officer’s sense of self-legitimacy. Essentially, officers who have a greater sense of confidence and view their power as legitimate are more motivated in their work.

Wolfe and Nix (2016) used data obtained from a survey of deputies at a medium sized police department in southeastern United States. The survey was administered online in February of 2015 and participants were asked to indicate their level of agreement or disagreement to several statements. Overall, the results showed that deputies who reported being less motivated due to negative police publicity also indicated that they were less willing to participate in community



partnership. Additionally, officers who thought their department was fair and just were more willing to partner with the community, as well. Similarly, officers who had a high sense of self-legitimacy were also more likely to engage in community partnership. However, by examining the influence of organizational justice and self-legitimacy on the officers, the relationship between the Ferguson Effect and officers' willingness to engage in community partnership became insignificant. Overall, the results show that high profile incidents of police use of force like Ferguson appear to impact deputies' motivation, rather than directly impacting their willingness to participate in community partnership.

### **Influence of Race on Police Use of Force**

Furthermore, another factor that plays a role in police use of force incidents is race. Racial profiling and targeting people of a specific race is an issue within policing that may contribute to these instances of police use of excessive force. Ajilore and Shirey (2017) conducted research in order to determine whether or not African Americans are more likely to be victims of excessive use of force by police than by people of other races. High profile cases such as Ferguson have prompted this belief that African Americans are targeted disproportionately than people of other races. Ajilore and Shirey estimated the effect of race on excessive use of force incidents using data obtained from citizen complaints against the Chicago Police Department. The data were taken from the Citizens Police Data Project (CPDP) out of the Invisible Institute and spans from

2011-2015. Out of all the complaints against the Chicago Police Department, only 13.1% were complaints of excessive use of force, where only 2.2% of those complaints were sustained. Furthermore, Ajilore and Shirey found that the largest proportion of the sample group were African American males.

Ajilore and Shirey (2017) report that their findings exhibit confirmation that race does play a role in excessive use of force complaints. Their results show that African American males are 9.2% more likely to report incidents of excessive force than other forms of complaints. Additionally, African Americans are less likely to have their complaints sustained than people of other races. This research shows that there is a need to better understand police behavior through additional studies.

### **Implications of Prior Literature**

Overall, the literature reviewed provides limited support for the Ferguson Effect. Researchers generally found that their results were not statistically significant when analyzed, even though the data collected may have appeared to support the Ferguson Effect. Similar conclusions were drawn regarding the depolicing effect. It is important to note that the media does in fact influence officers' perceptions, if not their behaviors directly (Blake & Lafond, 2017). Therefore, more research on the topic is needed to understand police behavior and the full implications of high-profile incidents of police use of force. This study examined whether there is a statistically significant increase in violent crime

following police use of force incidents. It is hypothesized that the instances of police excessive use of force will result in significantly higher levels of violent crime in the three cities that were examined.

### **Method**

This study used an interrupted time series analysis to examine the rates of violent crime across several different U.S. cities in the year after and the year prior to a high-profile incident of police use of force. For the purposes of this study, police use of force refers to an incident where a police officer utilizes deadly or excessive force on an individual while on active duty. The incidents that were examined also received national media coverage, making them “high profile” events. This study used open source data of violent crime rates in the selected cities where these incidents occurred in order to determine whether or not there is a positive relationship between the violent crime rates and the high-profile incidents of police use of force. The cases that were studied are as follows:

- Laquan McDonald from Chicago, Illinois in October 2014
- Tamir Rice from Cleveland, Ohio in November 2014
- Freddie Gray from Baltimore, Maryland in April 2015

This study examined the hypothesis that violent crime rates will have increased in Chicago, Cleveland, and Baltimore after each police use of force incident. For the cities of Chicago and Baltimore, the cities’ open data portals were used. These data portals contain information about all crimes reported in the

city. For the city of Cleveland, state and federal crime records were examined. The crime rates for the year(s) before and the year(s) after each incident were visually represented through time series plots. In cases where there is a wide variety, the data were analyzed by a multiple month range. Several statistical tests were used to determine if there were statistically significant changes in the rates of violent crime. Additionally, non-violent crimes were examined as well in order to compare changes in the overall crime rates.

### **Data**

For the purposes of this study, the crime rates in each respective city are separated into two categories: violent and non-violent. Violent crimes are those criminal acts which involve inflicting bodily harm onto another human being, or acts that are committed with the intention of inflicting harm to another human being. Non-violent crimes are those criminal acts in which the victim is not human, and no bodily harm is inflicted upon a human. The crime rates below are separated by each city: Chicago, Cleveland and Baltimore, as well as, separated by year, depending on when the high-profile incident of police brutality occurred. For Chicago and Cleveland, the incidents involving Laquan McDonald and Tamir Rice both occurred in 2014, therefore the years 2013 through 2015 are examined for those two cities. The Chicago data were taken from the city of Chicago's open data portals (City of Chicago: Data Portal, 2019). The crime data from Cleveland were taken from the Uniform Crime Report statistics (U.S. Department of Justice,

2019). For Baltimore, the years 2014 through 2016 are examined because the incident involving Freddie Gray occurred in 2015. The data from Baltimore were taken from the city of Baltimore's open data portal (Baltimore: Open Data, 2019).

Additionally, it is important to note the fluctuation of the overall crime rate in the United States during these years. In 2013, the overall violent crime rate in the United States was 369.1 per 100,000 people. In 2013, the number of property, or non-violent crimes in the United States was 8,650,761 making the total rate, 2,733.3 per 100,000 people. In 2014, the violent crime rate decreased slightly to 361.6 per 100,000 people. In 2014, the total rate of property/non-violent crimes was 2,574.1 per 100,000 people. In 2015, the number of violent crimes increased slightly to 373.7 per 100,000 people, while the non-violent crime rates decreased slightly to 2,500.5 per 100,000 people. In 2016, the number of violent crimes also increased to a rate of 397.5 per 100,000 people. In 2016, the estimated total property crimes in the United States decreased slightly to 2,451.6 per 100,000 people (Federal Bureau of Investigation, 2019).

### **Chicago**

The violent crime rates that were observed in Chicago were assault, robbery and homicide (see *Table 1*). The non-violent crime rates that were examined were burglary, motor vehicle theft and theft (see *Table 2*). Starting with the violent crime rates, there is an observed decrease in assault and robbery from 2013 to 2014 (see *Figure 1*). There is an observed increase in homicide from 2013

to 2014 as well. From 2014 to 2015, there is an observed decrease in robbery, while there is an observed increase in assault and homicide. Regarding the non-violent crime rates, there is an observed decrease in burglary, motor vehicle theft, and theft from 2013 to 2014 (see *Figure 2*). From 2014 to 2015, there was a decrease in burglary and theft. There was an observed increase in motor vehicle theft from 2014 to 2015, as well. Overall, the violent crime rates do not appear to show any major changes from the years 2013 to 2015. On the other hand, the non-violent crime rates show somewhat of a decrease in the majority of the crimes listed throughout the span of the three years.

### **Cleveland**

In Cleveland, the violent crime rates that were observed were aggravated assault, robbery and homicide (see *Table 3*). The non-violent crime rates that were observed were burglary, motor vehicle theft and larceny (see *Table 4*). In regard to the violent crime rates, there is an observed decrease in robbery and aggravated assault from 2013 to 2014 (see *Figure 3*). There is an observed increase in homicide from 2013 to 2014 as well. From the year 2014 to 2015, there is an observed decrease in robbery and aggravated assault. There is an observed increase in homicide from 2014 to 2015. Looking at the non-violent crime rates, there is an observed decrease in each crime, burglary, larceny, and motor vehicle theft from 2013 through 2015 (see *Figure 4*). There are no observed increases in non-violent crime rates. Overall, the non-violent crime rates appear to show a

steady decrease from the years 2013 to 2015. On the other hand, the violent crime rates do not appear to show any major changes throughout the span of the three years.

### **Baltimore**

The violent crime rates that were observed in Baltimore were aggravated assault, robbery and homicide (see *Table 5*). The non-violent crime rates that were observed were burglary, auto theft and larceny (see *Table 6*). There is an observed increase from 2014 through 2015 in homicide, robbery and aggravated assault in regard to the violent crime rates (see *Figure 5*). The number of homicide incidents decreased from the year 2015 to 2016. Furthermore, there is an observed increase in robbery and assault from 2015 to 2016. In regard to the non-violent crime rates, there is an observed decrease in larceny from the year 2014 to 2015 (see *Figure 6*). Furthermore, there was an observed increase in auto theft, burglary, and larceny from auto from 2014 to 2015. There was an observed decrease in larceny, burglary and larceny from auto from 2015 to 2016. In the same time span, there was an observed increase in auto theft. Overall, the violent crime rates show some steady increases from 2014 to 2016. Additionally, the non-violent crime rates do not appear to show any major changes in the majority of the crimes listed throughout the span of the three years.

### **Comparing All Three Cities**

*Figures 7, 8 and 9* depict the violent crime rates for all three cities in this study. The figures are labeled with -1, 0 and 1, to represent the years before, during and after each incident of police use of force. In regard to the homicide rates, there appears to be an overall increase in rates from the year prior to the high profile police use of force incident to the year after the incident (see *Figure 7*). As for the robbery rates, there is a steady increase observed in Baltimore, while there is a steady decrease observed in Cleveland during the time period (see *Figure 8*). There is a slight decrease as well in the rates from Chicago during this span of three years. Additionally, the assault rates in Cleveland during the three year span decreased (see *Figure 9*). There is a slight increase in the assault rates from Baltimore and Chicago, as well. Overall, the three cities show conflicting data for the assault rates and the robbery rates, while all three share a similar increase in homicide rates.

### **Results**

In order to further compare the data, a paired T-test was conducted for the crime rates before and after each high-profile incident of police use of force in each city. A paired T-test is a test of statistical significance used to determine if there is statistical evidence that the mean difference between paired observations on a particular outcome is significantly different. The paired T-test is appropriate for this study because it allows for a comparison between the mean crime rates for



all three cities in the different years. The test of statistical significance indicates if the crime rates had a significant change over the three year span (Maxfield & Babbie, 2015).

In this study, the mean crime rates in all three cities for the year before the high-profile incident and the mean crime rates for the year after the incident are examined for each type of violent crime (see *Tables 7 through 12*). The statistical significance of the relationship is tested at the  $p=.05$  level. For the paired T-test examining the homicide rates for all three cities, the p value was 0.2026, indicating that there is not a statistically significant relationship between the homicide rates before and after the high profile incident of police use of force for each of the cities. For this paired T-test examining the robbery rates for all three cities, the p value was 0.9134. Thus, there is not a statistically significant relationship between the robbery rates before and after the high profile incident of police use of force for each of the cities. For the paired T-test examining the assault rates for all three cities, the p value was 0.5454. There is not a statistically significant relationship between the assault rates before and after the high profile incident of police use of force for each of the cities.

### **Discussion**

In conclusion, this study looked to determine if the rates of violent crime in three cities increased prior to a high-profile incident of police use of force in those cities. The theory of de-policing suggests that following a high-profile

incident in which the conduct of the police comes under scrutiny, police officers will retreat from their work (Shjarback, Pyrooz, Wolfe and Decker, 2017). The theory holds that officers taking a step back from proactive policing would lead to an increased rate of crime, known as the Ferguson Effect (Rosenfeld, 2015). The violent crime rates in the three cities of Chicago, Cleveland and Baltimore, for the years before, during and after a high-profile incident of police use of force were examined in this study. The paired T-tests of the data showed that there was no statistically significant change in the crime rates over the three year span. There was not a significant relationship in the change in crime rates for homicide, assault and robbery between the year before each high-profile incident of police use of force and the year after the incident. The hypothesis that the crime rates would increase in Chicago, Baltimore and Cleveland due to de-policing is not supported by the data.

Similar to prior research, this study shows no support for the de-policing aspect of the Ferguson Effect for the three cities examined. Both Rosenfeld (2015) and Pyrooz et al (2016) also failed to find a statistically significant relationship in the change in crime rates which would suggest a Ferguson Effect. Although this study failed to support the Ferguson Effect, research such as Nix & Pickett (2017) shows that police officers believe in the Ferguson Effect, whether it is real or not. This belief may lead officers to adapt their policing behaviors regardless of what studies have shown. Therefore, officers should be educated

about these types of studies so that the media and other high profile incidents do not negatively impact the field of policing too drastically.

Although this study shows no support for de-policing or the Ferguson Effect, high profile incidents of police use of force still impact the communities in which they occur. Communities have protested against the police in response to these incidents. Rather than focusing on de-policing, there should be a larger focus on community policing. Community policing aims at restoring the relationship between the police and the citizens. Therefore, this study, as well as similar studies, are important for police to take into consideration.

### **Limitations**

There are several limitations to this study that are important to discuss. To start, this study uses a relative small sample size. Only the three cities of Chicago, Baltimore and Cleveland in which three high profile incidents of police use of force have occurred were examined. There are numerous other incidents and cities across the country that can be examined to provide additional data regarding the change in crime rates. Looking at a larger sample size and comparing more cities may lead to more accurate results. Additionally, looking at cities with varying populations would also allow for a wider range of results.

Furthermore, the study was also limited in the fact that only the crimes of homicide, assault and robbery were analyzed with the paired T-test. Although the other crime rates were taken into consideration, the tests were focused on the

violent crime rates for each of the three cities. Conducting similar tests focusing more on other types of crime may lead to additional results. In addition, this study only examined the crime rates during a three-year span: before, during and after the high-profile incident. This limited time period does not account for changes in crime rates that could have occurred during a longer period of time after the high profile incident of police use of force. Further studies can examine the crime rates during a longer time period to determine whether there would be a prolonged change in the crime rates resulting from the high profile incidents.

#### **Recommendations for Future Research**

Further studies can be done examining different high profile incidents of police use of force in other cities across the country. Studies looking at other incidents and the crime rates in those cities may yield different results. Cities with varying populations may also provide different results as well. As stated earlier, examining the change in crime rates over a longer period of time could yield different results than observed in the three year time span.

Additionally, this study focused mainly on the violent crime rates for each city. Further studies can seek to examine the non-violent crime rates for the cities in which high profile incidents of police brutality have occurred. Other studies can examine more specific areas of crime, by looking at crimes such as resisting arrest or interference with police, for example. These types of crimes could

indicate changed attitudes towards the police following a high profile incident of police use of force.

It is important to conduct further research on this topic in order to determine exactly how high profile incidents of police use of force impact police officers and their surrounding communities. Due to these high profile incidents in the media, the police have come under strict scrutiny. Police officers are now required to wear body cameras so that if their actions are called into question, there is video proof of what actually occurred. With the help of future studies, it can be determined the true implications of these high profile incidents involving police use of force.

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**Table 1***Violent Crime Rates in Chicago, IL (2013-2015) per 100,000 people*

<b>Type of Crime</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Assault	659.09	619.46	625.23
Homicide	15.48	15.61	18.41
Robbery	433.48	359.13	353.53

**Table 2***Non-Violent Crime Rates in Chicago, IL (2013-2015) per 100,000 people*

Type of Crime	2013	2014	2015
Burglary	656.23	533.95	483.56
Motor Vehicle Theft	461.42	363.27	369.30
Theft	2623.25	2256.31	2103.21

**Table 3***Violent Crime Rates in Cleveland, OH (2013-2015) per 100,000 people*

Type of Crime	2013	2014	2015
Homicide	14.80	16.12	20.04
Robbery	892.39	765.51	631.47
Aggravated Assault	4900.97	4701.03	4279.79

**Table 4***Non-Violent Crime Rates in Cleveland, OH (2013-2015) per 100,000 people*

Type of Crime	2013	2014	2015
Burglary	2113.29	1781.50	1162.49
Larceny	2770.33	2661.63	2122.29
Motor Vehicle Theft	1055.49	985.03	706.74

**Table 5***Violent Crime Rates in Baltimore, MA (2014-2016) per 100,000 people*

Type of Crime	2014	2015	2016
Homicide	33.86	54.97	51.64
Robbery	627.92	762.19	909.96
Aggravated Assault	684.25	765.73	835.27

**Table 6***Non-Violent Crime Rates in Baltimore, MA (2014-2016) per 100,000 people*

<b>Type of Crime</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Auto Theft	586.04	733.75	748.39
Larceny	2904.20	2849.31	2755.54
Burglary	1103.56	1262.72	1200.13

**Table 7***Comparing Change in Homicide Rates for all three cities*

City	Year Before Incident (t= -1)	Year After Incident (t= 1)	Change
Chicago	14.8	20.04	5.24
Baltimore	33.86	51.64	17.78
Cleveland	15.48	18.41	2.93

**Table 8***Paired T-Test Comparing Change in Homicide Rates*

<b>Year</b>	<b>Mean</b>	<b>Standard Deviation</b>
Before Incident	21.38	10.81
After Incident	30.03	18.73
Change	8.65	7.99



**Table 9***Comparing Change in Robbery Rates for all three cities*

City	Year Before Incident (t= -1)	Year After Incident (t= 1)	Change
Chicago	433.48	353.53	-79.95
Baltimore	627.92	909.96	282.04
Cleveland	892.39	631.47	-260.92

**Table 10***Paired T-Test Comparing Change in Robbery Rates*

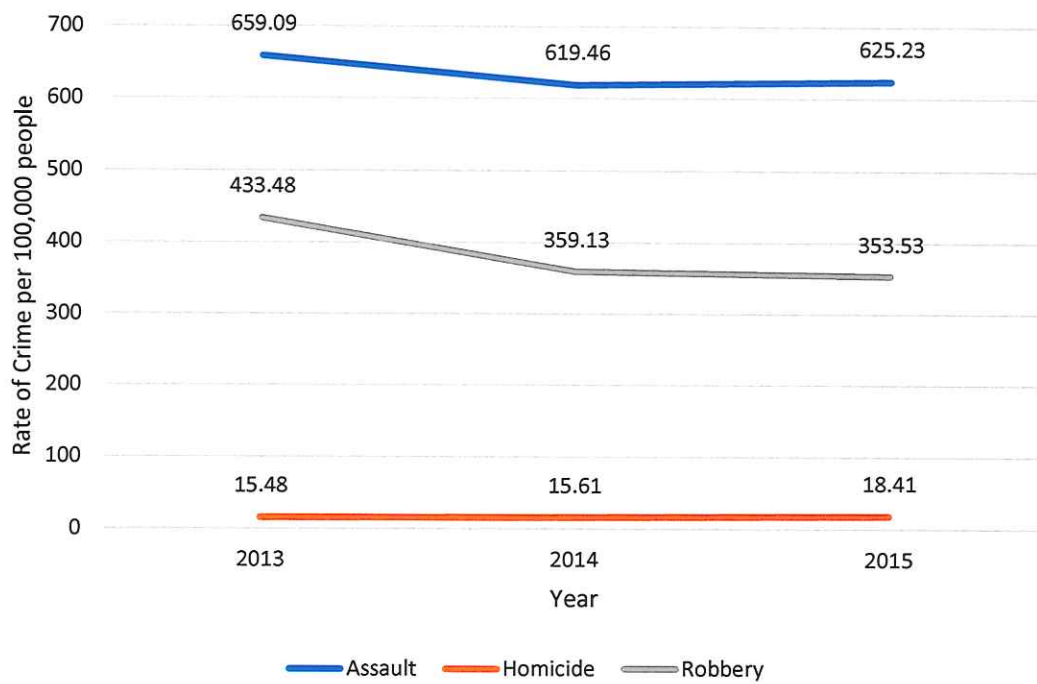
<b>Year</b>	<b>Mean</b>	<b>Standard Deviation</b>
Before Incident	651.26	230.34
After Incident	631.65	278.22
Change	-19.61	276.46

**Table 11***Comparing Change in Assault Rates for all three cities*

<b>City</b>	<b>Year Before Incident</b>	<b>Year After Incident</b>	<b>Change</b>
	<b>(t= -1)</b>	<b>(t= 1)</b>	
Chicago	659.09	625.23	-33.86
Baltimore	684.25	835.27	151.02
Cleveland	4900.97	4279.79	-621.18

**Table 12***Paired T-Test Comparing Change in Assault Rates*

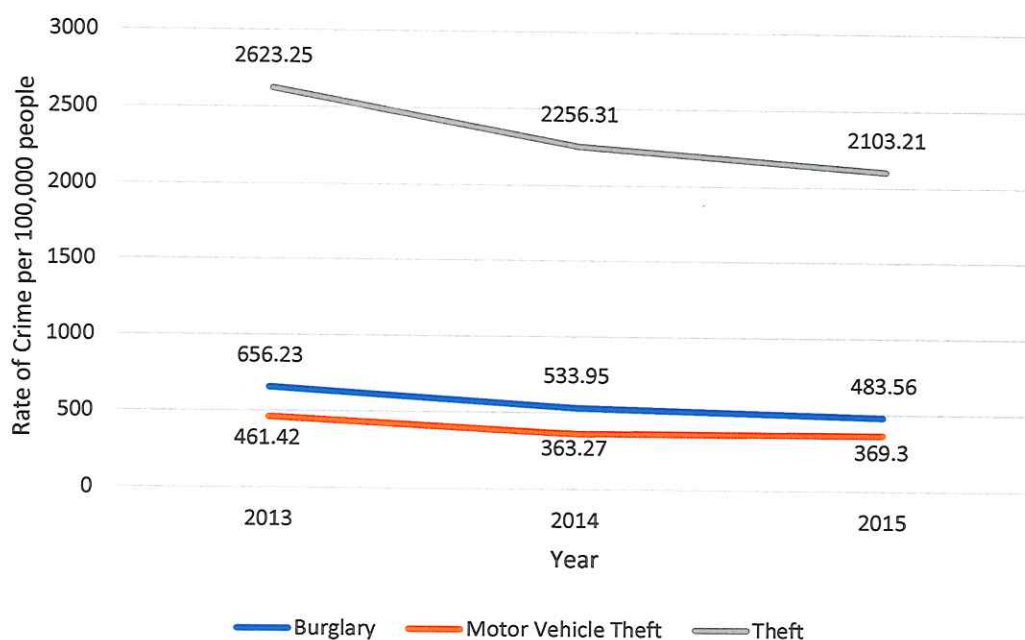
<b>Year</b>	<b>Mean</b>	<b>Standard Deviation</b>
Before Incident	2081.44	2441.82
After Incident	1913.43	2052.02
Change	-168.01	403.20

**Figure 1***Violent Crime Rates in Chicago, IL (2013-2015)*

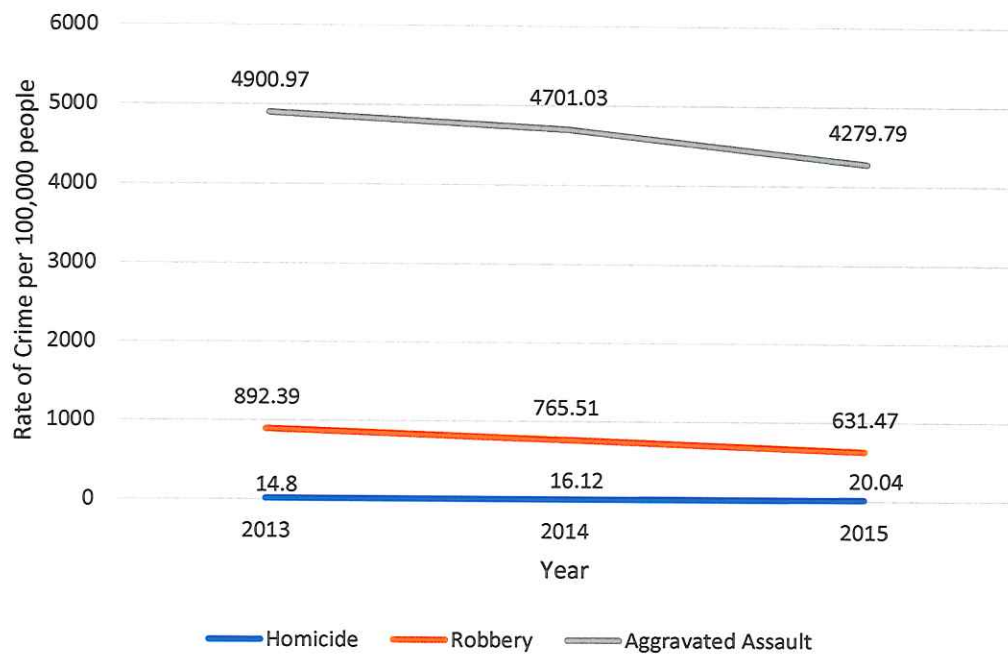
*Note.* This figure illustrates the Chicago crime rates for assault, homicide and robbery per 100,000 people during the three year span.

**Figure 2**

*Non-Violent Crime Rates in Chicago, IL (2013-2015)*



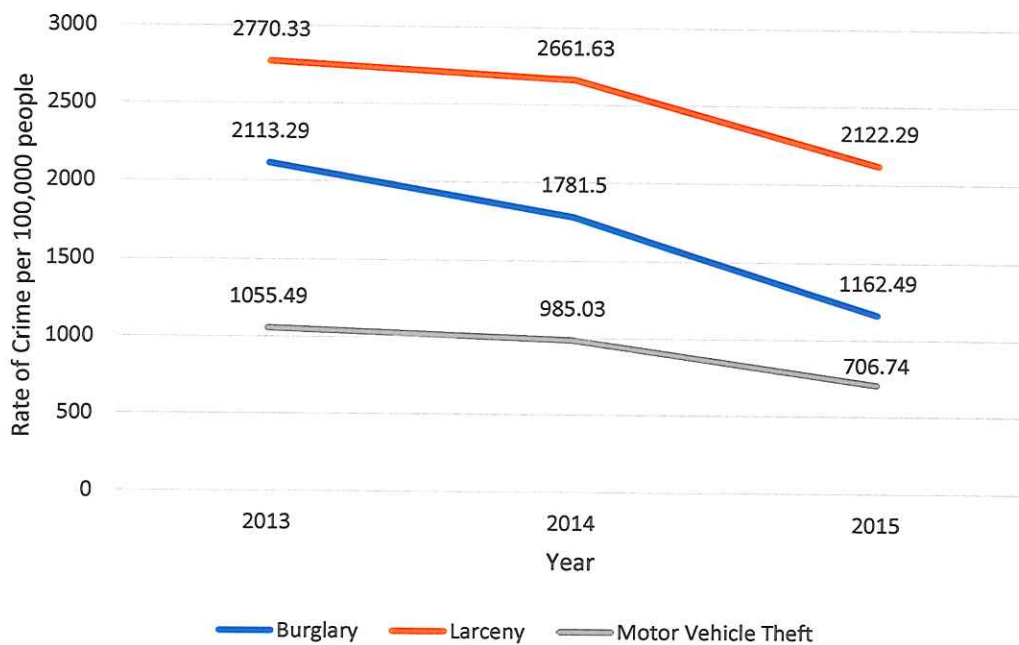
*Note.* This figure illustrates the Chicago crime rates for burglary, motor vehicle theft and theft per 100,000 people during the three year span.

**Figure 3***Violent Crime Rates in Cleveland, OH (2013-2015)*

*Note.* This figure illustrates the Cleveland crime rates for aggravated assault, homicide and robbery per 100,000 people during the three year span.

**Figure 4**

*Non-Violent Crime Rates in Cleveland, OH (2013-2015)*

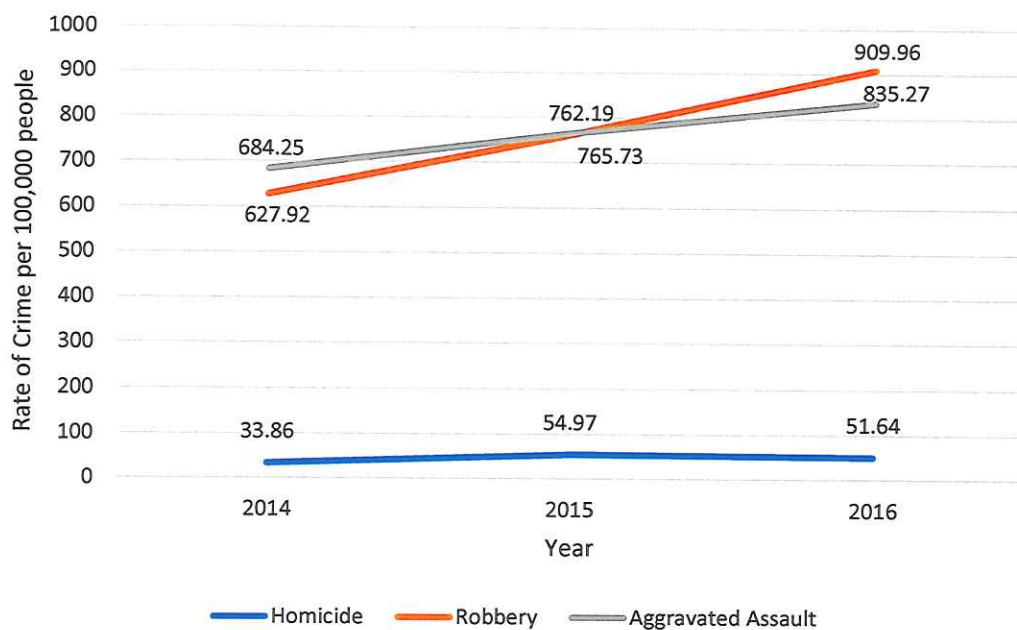


*Note.* This figure illustrates the Cleveland crime rates for burglary, larceny and motor vehicle theft per 100,000 people during the three year span.



**Figure 5**

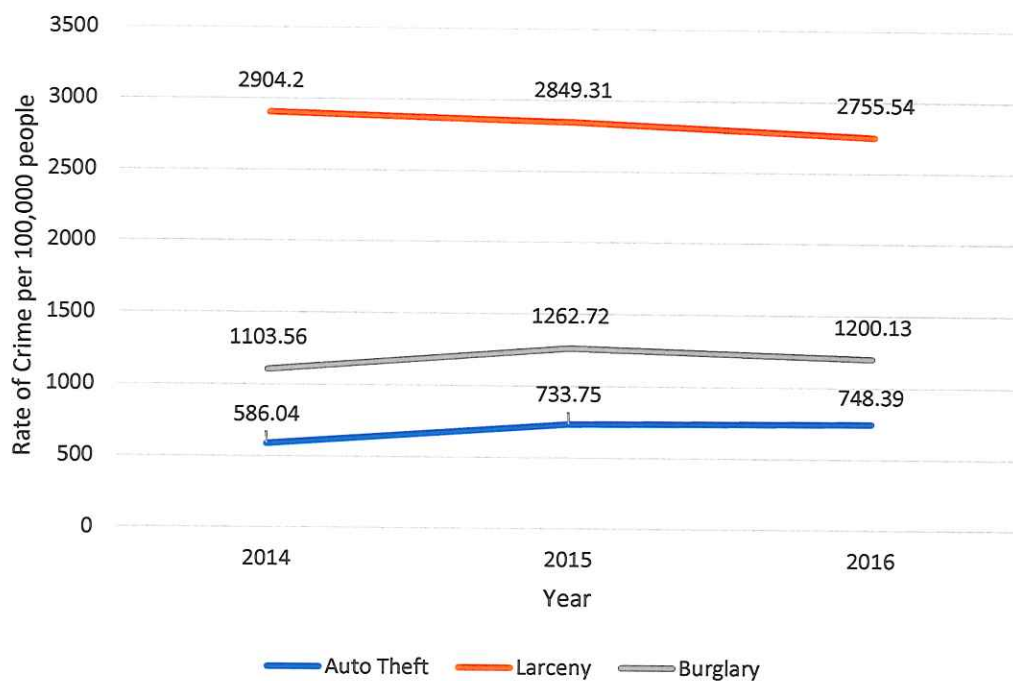
*Violent Crime Rates in Baltimore, MA (2014-2016)*



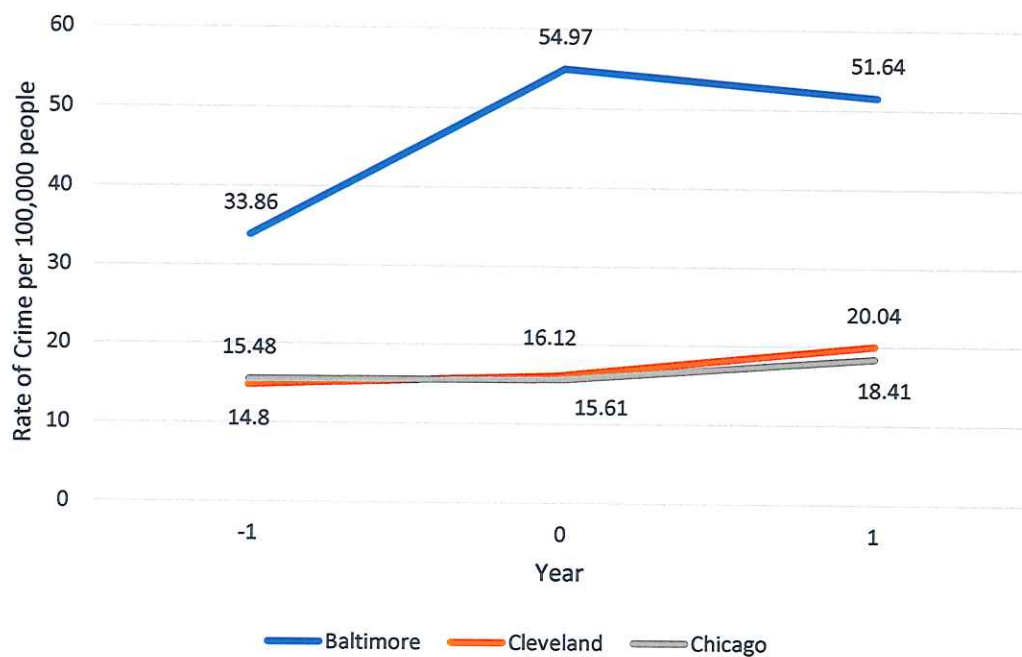
*Note.* This figure illustrates the Baltimore crime rates for homicide, robbery and aggravated assault per 100,000 people during the three year span.

**Figure 6**

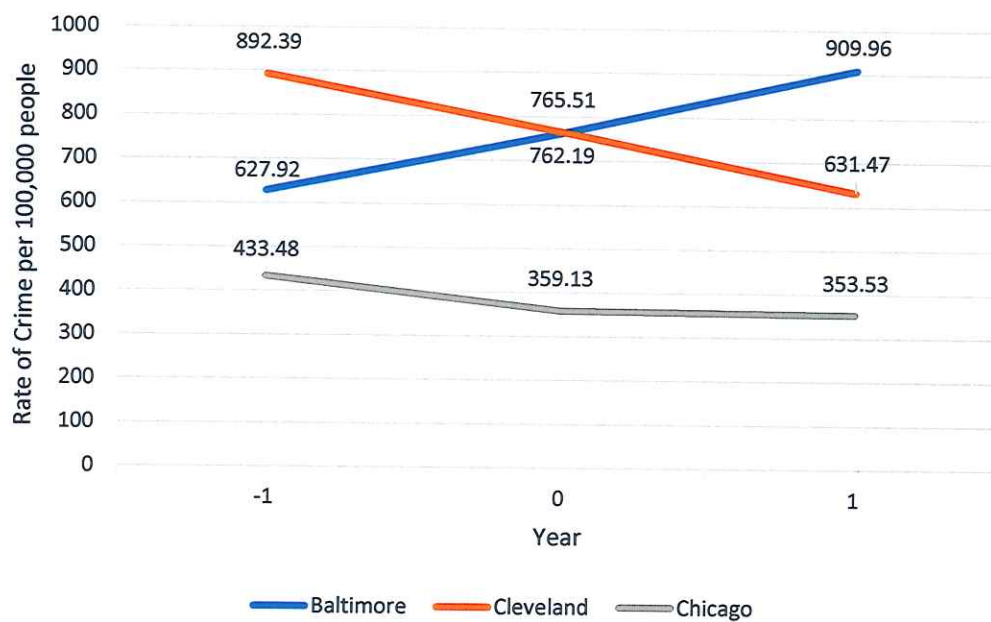
*Non-Violent Crime Rates in Baltimore, MA (2014-2016)*



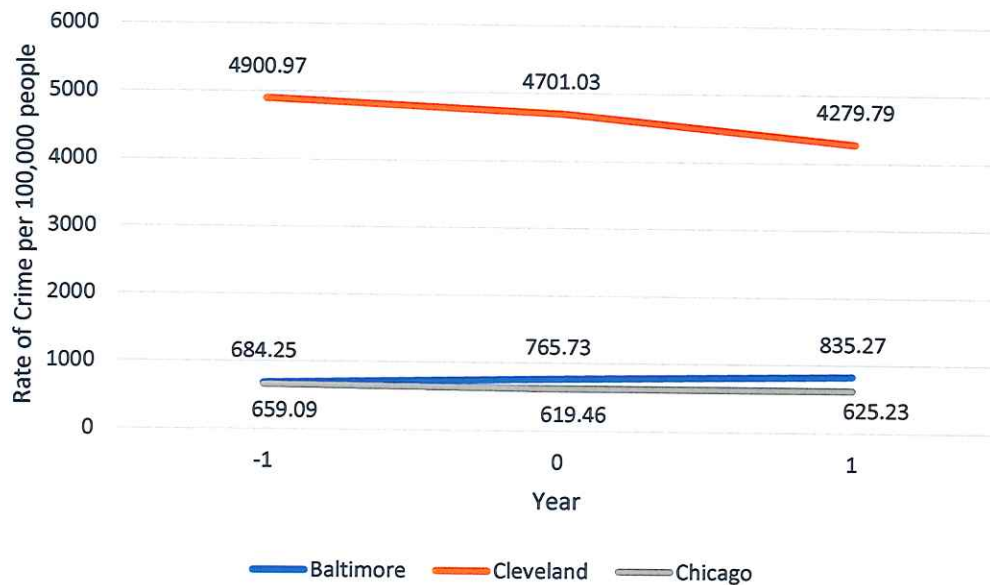
*Note.* This figure illustrates the Baltimore crime rates for auto theft, larceny and burglary per 100,000 people during the three year span.

**Figure 7***Homicide Rates for All Three Cities*

*Note.* This figure illustrates the homicide rates per 100,000 people in the three cities. -1 represents the year before the high profile incident of police use of force, 0 represents the year during and 1 represents the year after.

**Figure 8***Robbery Rates for All Three Cities*

*Note.* This figure illustrates the robbery rates per 100,000 people in the cities. -1 represents the year before the high profile incident, 0 represents the year during and 1 represents the year after.

**Figure 9***Assault Rates for All Three Cities*

*Note.* This figure illustrates the assault rates per 100,000 people in the cities. -1 represents the year before the high profile incident, 0 represents the year during and 1 represents the year after.