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Use of Force in Policing: Do Female Police Officers Use Unjustifiable Force as Often as Male Officers?

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**Use of Force in Policing: Do Female Police Officers Use Unjustifiable Force as Often as
Male Officers?**

A Thesis Submitted to the
Graduate Faculty of Jacksonville State University
in Partial Fulfillment of the
Requirements for the Degree of
Master of Science
with a Major in Criminal Justice

By

Carma Hope Dobson

Jacksonville, Alabama

May 3, 2024

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ABSTRACT

Use of force (UOF) is a common practice in policing. My study focuses on the disposition of the use of unjustifiable force in policing. Utilization of pre-existing data with 5,771 use of force incidents from the New Orleans, Louisiana police department in the years of 2016-2021 produces an answer to the research question: Do female police officers use unjustifiable force as often as male officers? The chi-square test of independence results in my study indicates that there is no statistical difference between males and females.

Acknowledgments

I want to thank my family, more specifically, my partner Jacob, my daughter Ivy Bain, my mother Danielle, and my nana. Without my family, I would not be the first person in my family to acquire a master's degree. The support of my family has been bountiful with consistent patience while I study and strive to be the best student I can be. I am grateful for the support from my thesis committee members, who guided me throughout the master's program at Jacksonville State University. Also, I would like to thank the rest of the department for their encouragement and advice through undergraduate and graduate school. My boss and mentor, Professor Joseph Scott Morgan, gave me opportunities and projects I will never forget. Thank you, Professor Morgan, for your support. I will forever be grateful for my experience working as your research assistant.

CARMA HOPE DOBSON

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Introduction

Previous research has concluded that there is an existing relationship between officer gender and use of force incidents. The studies failed to explore their connection to the disposition of these incidents of use of force (Boehme et al., 2022). My research question is, do female police officers use unjustifiable force as often as male officers? I have data from a public source, the New Orleans Police Department (NOPD), to test the research hypothesis that the variables of officer gender and disposition of force are dependent. I performed a chi-square test of independence on the data set provided by NOPD.

Researchers strive to understand why some officers engage in physical actions more than others (Worden, 1989). The 1989 study found that situational factors have a direct effect on officers' decisions while on duty. Moreover, research suggests that the use of force incidents differ by gender. Factors such as officer behavior, decision-making, use of coercion, and other officer-civilian interactions can be affected by the gender of the police officer (Novak et al., 2011).

Research claims:

Female officers are more influenced by quantity of evidence than their male counterparts.

We surmise female officers are more concerned than males with making arrests on 'strong' cases where there is an abundance of evidence so as to avoid appearing incompetent by having 'weak' cases dismissed. Novak et al. (2011)

According to Sherman (1980), there are four types of police officer behaviors: detection activities, service activities, the use of arrest/citations, and the use of force. Officers can behave differently in the presence of other officers, male or female, changing the outcome of the interactions on the scene (Schuck & Rabe-Hemp, 2005). This study researched the influence of officer gender and use of force using a large sample size of both genders from several police departments. Also, the

study used the sample to make predictions of officer and civilian injuries based on the presence of female officers. The study concluded that women and men practice policing differently and that recruiting more females could help reduce excessive force (Schuck & Rabe-Hemp, 2005). Interactions involving female officers can affect the use of force occurrences. Individuals' perception of law enforcement interactions with the public outlines the characteristics of the officer, experiences, and characteristics of people related to the officer's use of force (Deller & Deller, 2019).

My research expands on gender studies in policing use of force and the variables of officer gender and use of force in this research are shared by previous studies. Rabe-Hemp (2008) concluded that female officers are less likely to use force than male officers. Rabe-Hemp performed a logistical regression analysis from the Project on Policing Neighborhoods in two police departments, Indianapolis, Indiana, and St. Petersburg, Florida, from 1996-1997. The dependent variable in her study expands on the use of force, including factors such as officers' behavior and verbal interactions, while broadening the additional factors associated with the dependent variable. However, Hoffman and Hickey (2005) researched the use of force and officer-gender relationships between 1993 and 1999. Their research showed no difference in physical force, but lower rates of weapon usage in women officers compared to men. Hoffman and Hickey's research was based on data collected from the Montgomery County Police Department in Washington, D.C., and consisted of over one thousand officers. At this time, females made up 16% of the law enforcement population in the U.S. and in the study of the Montgomery County Police Department, 18.6% of the law enforcement population was female.

Similar to previous research, my research will focus on the use of force in policing and the officer's gender. An additional variable in this study is the justification disposition of the

force used by male and female officers. This study will expand on previous research studies using recent data and researching the disposition of officers' use of force and officer gender. Previous research has failed to address the variable of justification of the force used by male and female officers.

Literature Review

Thirty years ago, the media overflowed with news on police violence and brutality lawsuits (Schulz, 1995). Since the 1970s and into the early 2000s law enforcement has accounted for nearly thirty percent of television broadcasting, including news and entertainment (Jones, 2003). According to Vitro et al. (2022), in 2019 over 60% of prime-time dramas on the major U.S. broadcast networks were series focused on crime; these series criticized the policing occupation in their portrayals by making officer protagonists. Between entertainment and news producers, the public has an imprecise perception of law enforcement since these outlets are the primary source of the public's information consumption (Robinson, 2011; Surette, 2011; Wilson, 2015). Research on the use of force and the variables of the officer's gender need further exploration.

The Crime Control Act of 1973 permitted females to become sworn officers at any police organization funded by the federal government (Rabe-Hemp, 2009). Still, policing remains a male-dominated occupation in the U.S. (Kakar, 2002). In 2019, female officers made up 12.8% of all officers across the U.S. (Population Group, 2019). Departments hiring more females find that female officers are more capable of de-escalating violent situations (Lonsway et al., 2000). In many cases, female officers possess a higher degree of interpersonal skills than their male counterparts, resulting in community members preferring female officers to respond to dangerous situations (Lonsway et al., 2000).

A recent study analyzed data from three large police departments: Dallas, Indianapolis Metropolitan, and New Orleans police departments. The research studied the relationship of use of force incidents and the presence of female officers. Researchers concluded that there was a positive relationship between female officers being present and tasers being displayed in both Dallas and New Orleans. In Indianapolis Metropolitan and Dallas Police Departments, there was a positive relationship between female officers being injured during use of force incidents. In other words, female officers were sustaining more injuries during use of force incidents than their male counterparts (Boehme et al., 2022).

History of Women in Policing

Although my research focuses on male and female police officers, it is essential to review the history of the integration of women into policing to establish a better understanding of how they impacted the field. The Crime Control Act of 1973 permitted females to become sworn officers at any police organization funded by the federal government (Rabe-Hemp et al., 2009). The first female officer in the U.S. was at the Los Angeles Police Department in 1910 (Sultan & Townsey, 1981). In the early 1900s females were appointed as matrons as they formally entered into law enforcement. Their duties consisted of taking care of other women and children while they were in police custody. At this time, females in law enforcement could not make an arrest. On the other hand, in the 1800s, females in law enforcement worked unofficially while serving their husbands or male family members who were sheriffs of their jurisdiction (Archbold & Schulz, 2012). Many of the first female police officers were members of the upper-middle class and typically had some form of higher education. These women were expected to serve their communities with their degrees while remaining subordinate to males and not to expect equal pay to men even if the males had less education (Kakar, 2002).

Over the years, the number of females in policing began increase, and training procedures changed to benefit both male and female officers as a team. These changes included that physical training was adapted so that both sexes of officers could be more prepared for encounters with the same or opposite sex when carrying out their duties (Brown, 1994). Another result of the increasing numbers of women in policing is the question: do female officers use force as much as male officers? Researchers began to perform studies testing this research question.

Use of Force in Policing

The use of force by police officers is a topic of great importance. Use of force events in policing can often lead to community unrest and general distrust of the police. Even defining what constitutes use of force is a matter of debate. The International Association of Chiefs of Police defined use of force as the "amount of effort required by police to compel compliance by an unwilling subject" (*Overview of police use of Force*, 2020). According to the University of California Los Angeles (UCLA) use of force is, "any physical effort used to control, restrain or overcome the resistance of another" (University of California, Los Angeles, 2017). These definitions reflect the broad interpretation the country has regarding use of force in policing.

Within my study, force is defined as physical effort to compel compliance by an unwilling subject above unresisted handcuffing, including pointing a firearm at a person (New Orleans Police Department, 2015). The amount of energy or power applied occurs across a broad spectrum of force. Moreover, the range can be as simple as struggling with a subject to detain them to using deadly force with a firearm. Use of force is common in policing. To uphold their duties of serving and protecting communities' officers use force in physical struggles when detaining an individual. When someone is eluding an officer, officers will use weapons such as

their taser to stop the suspect. A more lethal example would be when someone puts the public or the officer's life in danger using a weapon and refuses to drop the weapon. The officer will be forced to use deadly force with their firearm. The use of force is a necessary means to an end in policing (Ross, 2002).

Since the use of force can be interpreted differently by the public and the officers, the court is responsible for having an independent standard for measuring excessive force. (Ross, 2002). Cornell Law School defines excessive force as:

Force in excess of what a police officer reasonably believes is necessary. A police officer may be liable for using excessive force in an arrest, an investigatory stop, or other seizures. A police officer may also be liable for not preventing another police officer from using excessive force. Whether the police officer has used force in excess of what he reasonably believed necessary at the time of action is a factual issue to be determined by the jury. (Legal Information Institute, 2023)

In 1967, the United States Administration of Justice (currently the Department of Justice) proposed police use of force policies designed to protect both civilians and officers. With the support of the President's Commission on Law Enforcement, all law enforcement agencies today have policies overseeing the use of force and police training of use of force. Police are also mandated to submit reports on any incident involving the use of force. These reports submitted by officers contain details of the events and circumstances leading up to the use of force incident (Alpert & Dunham, 1999).

The landmark U.S. Supreme Court case of *Graham v. Connor* concluded that an officers' actions must be objectively reasonable in accordance with the totality of the circumstances of confrontation (*Graham v. Connor*, 1989). Furthermore, the definition of reasonableness has no

boundaries because there is no way to measure the situation of the officer's encounter. Police officers are forced to make split-second decisions in upholding their duties of protecting the community and themselves. The subjective nature of decisions to use force requires the department and the court to examine all the facts and circumstances of each use of force incident (*Graham v. Connor*, 1989). Graham was a diabetic who rushed into a convenience store to purchase some juice. He quickly left the store when he noticed a long line at the register. Officer Conner became suspicious after seeing Graham flee the establishment. He followed the car that Graham entered and proceeded to stop the vehicle. Back-up law enforcement arrived on the scene and handcuffed Graham while Connor investigated the situation of him exiting the store. Graham pleaded his condition to the officers in an attempt for aid. During the stop Graham sustained various injuries before he was released when Officer Conner's investigation revealed Graham's innocence. Afterward, Graham filed a lawsuit in the District Court.

Most research on the use of force in policing focuses on the use of deadly force or force with firearms (Bolger, 2015). Researchers cannot publicly access detailed use of force data to draw conclusions, including more variables (Alpert, 2016). A federal study of the Phoenix Arizona Police Department concluded that the use of force with a weapon occurs less than two percent of at all encounters with police officers (Garner et al., 1996). An officer's level of force is directly correlated to the training on the use of force in any situation no matter the circumstances irrespective of gender (Schuck & Rabe-Hemp, 2005).

Differences in Gender

There are many different propositions as to why female officers may or may not use force at the same rate as male police officers. One is that the rate at which the genders were socialized continues to differ significantly (Hoffman & Hickey, 2005). Researchers in the field studying use

of force in policing claim that female officers produced a neutral policing style that is more sufficient for de-escalating violent situations (Garner, et al., 2002). Studies revealed that female police officers are less likely to use confrontation than male officers (Terrill et al., 2003).

Research suggests that male officers practice control in policing by maintaining authority over the public. In order to maintain this control, research states that male officers' resort to physical altercations rather than a less violent approach (Garner, et al., 2002).

Some research suggests that the mere presence of a female officer being called to a scene with the potential for the use of force decreases the chances of a forced altercation (Rabe-Hemp, 2008). There is limited research on the relationship between female officer's influence in confrontational situations and their ability to avoid force compared to male officers. The existing research on the subject does not produce a significant relationship between use-of-force and gender characteristics (Hoffman & Hickey, 2005).

Studies have concluded that female officers practice less confrontational policing and write fewer citations. Also, studies have stated that female officers do not receive as many complaints as male police officers (Lonsway et al., 2002). Overall, departments with a higher female law enforcement population received fewer complaints from the public in 2016 (Porter & Prenzler, 2017). An additional benefit of having more female officers in a department is that these officers often display more effective communication skills than their male counterparts. Utilizing effective communication skills has proven to de-escalate violent situations that otherwise could have resulted in the use of force. (Deller & Deller, 2019; Lonsway et al., 2002).

Wright and Headley (2020) found that female officers use more excessive force against the opposite sex compared to male officers. Table 3 shows an example of gender-to-gender interaction using my research data (see Appendix C). They researched the correlative roles that

race and gender play in police use of force situations. They focused on “coercive behaviors by exploring what factors increase or decrease the severity of police use of force.”. Wright and Headley’s study utilized data from the Dallas Police Department in Texas and the Indianapolis Metropolitan Police Department (IMPD) in Indiana. The data sets contained information including officer race, service type, location, and officer gender. The departments did not provide detailed information on the incidents in which officers utilized force. Moreover, they only reported that force was used and the severity of the force utilized. Due to the lack of further information regarding these interactions that officers had, the measurement of the use of force provided is subject to bias. Without detailed information regarding the use of force incidents or video footage, the measurements are concluded by the department. Wright and Headley’s data set contains incidents from January 2014 to December 2016 for both departments. Their analysis found no overall significant difference in the use of force between male and female officers. (Wright & Headley, 2020).

Past Research

A 2005-2006 research study was conducted in Seattle, Washington, observing the relationship between at least one female police officer’s presence on the scene and injuries sustained in use-of-force occurrences. No observable relationship existed between suspect injuries and female officers' presence. Conversely, there was a significant relationship between officer injuries when a female officer was present (Smith et al, 2009). Research focusing on gender statistics in policing concluded that same-gender officer pairs consisting of females were less likely to use force than male and female pairs (Schuck & Rebe-Hemp, 2005). Hoffman and Hickey (2005) results found no statistical difference in the use of force by male and female

officers. Another research study conducted in 2002 concluded that male officers are one- and one-half times more likely to use force than female police officers (Garner et al., 2002).

Before the 1990s, only a few studies were researching the use of force in policing and looking into officer genders as a variable. In 1999, Alpert and Dunham found no significant difference in the use of force when focusing on officer gender. Alpert and Dunham reviewed nearly 550 use-of-force incidents in Oregon in 1995 and 794 in Florida in 1994 (Alpert & Dunham, 1999). A 1994 study looking at data from Phoenix, Arizona, conducted by Garner et al. (1996), concluded that male police officers had the highest rate of force used against male suspects. Their multivariate analysis consisted of 1,600 arrests made in the summer of 1994. The rate of force used by arresting female officers was significantly lower than that of their male counterparts (Garner et al., 1996). Previous research provides that female officers perform their responsibilities in policing differently than men do, and hiring more female officers could aid in reducing the use of force in departments (Schuck & Rabe-Hemp, 2005).

Ba et al (2021) performed a research study on the Chicago Police Department in Illinois. The researchers received data from 2012-2015. The data they were able to obtain included officer gender, race, and foreign language skills. The data also contained officers' arrests, stops and use of force over three years. After analyzing the data, they concluded a significant difference in female officers' behavior per 100 shifts. During 2012-2015, female police officers in Chicago made 0.61 fewer arrests per 100 shifts than male officers. Also, they found that not only are citizens less likely to become a subject of the use of force from a female officer.

In the twenty-first century, there have been significant changes in the world of criminal justice, specifically law enforcement. Media outlets exaggerate much of what the public sees as misconduct in policing. Today, the media have power over the public's perception of policing.

International research, including the U.S., contends that female officers practice a different style of policing that produces less use of force and more de-escalations of violent confrontations compared to the practices of male officers (Lonsway et al., 2000). Spillar's results reflected that female officers had fewer complaints and were less likely to use deadly force. Also, his study concluded that female officers were involved in fewer shooting incidents despite having just as many violent encounters as male police officers (Spillar, 1991).

Methodology

Dataset

My research question is: Do female police officers use unjustifiable force as often as male officers? The research hypothesis is that the variables of officer gender and disposition of force are dependent. My research uses a data set from New Orleans, Louisiana. The dataset was compiled by the New Orleans police department in reports of use-of-force incidents that range from the years 2016-2021. In addition to factors of force incident use, the information included in the dataset reflects relationships during the justification of force incidents and the officers' genders. The City of New Orleans Open Data's government website archives use of force incidents containing officer and subject demographics, date and time of the incident, officer's division, and shift, along with other details pertaining to the force used (Raasch, 2021). Before this dataset was obtained, an application for approval to use it as a part of this study was submitted to the Institutional Review Board for the Protection of Human Subjects (IRB) at Jacksonville State University in Jacksonville, Alabama. Jacksonville State University IRB approved the study and the methodology used in my research (see Appendix D).

My study utilizes nominal data collected from public resources containing both officer gender and disposition of use of force to analyze which gender was more likely to use justifiable

force in 2016-2021 from the New Orleans Police Department. Within the dataset, there were 6,294 incidents during the five-year collection period. Once other variables were removed from the police department's datasets, the officer's gender and disposition of force were entered into the statistical program Statistical Package for the Social Sciences (SPSS) to evaluate a relationship between variables.

Questions and Hypotheses

Research Question

Does a relationship exist in policing between disposition of the use of force and officer gender?

Null Hypothesis

There is no significant difference in the frequency of force usage based on officer gender.

Alternative Hypothesis

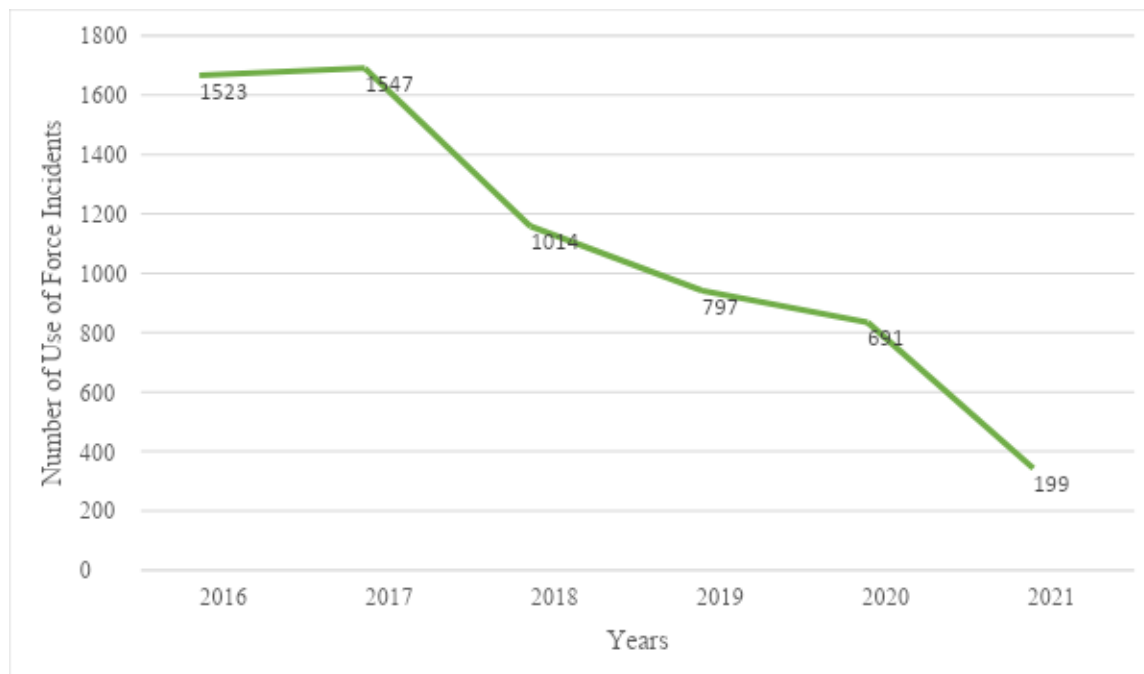
Female officers are significantly less likely to use force as frequently as male officers in law enforcement.

Details of the Dataset

The range in the data set is from January 1, 2016, to December 2020. Number of incidents overall and incidents per year: the year 2016 had 1,570 (27.20%) use of force incidents, 2017 had 1,578 (27.34%) incidents, 2018 had 1,120 (19.40%) incidents, 2019 had 962 (16.67%) incidents, 2020 had 837 (14.50%) incidents (see Figure 1). More details of the data set pertaining to the reason for force used in these incidents and the effectiveness of the force can be found in Appendix B.

Figure 1

Use of Force 2017-2020



Officer Gender

The dataset reported the gender of the officers involved. There were 5,187 (89.88%) use of force incidents involving a male officer within the dataset and 584 (10.12%) involving female officers. The eleven rows missing officer gender were not included in the study (see Table 6, Appendix B).

Level of Force

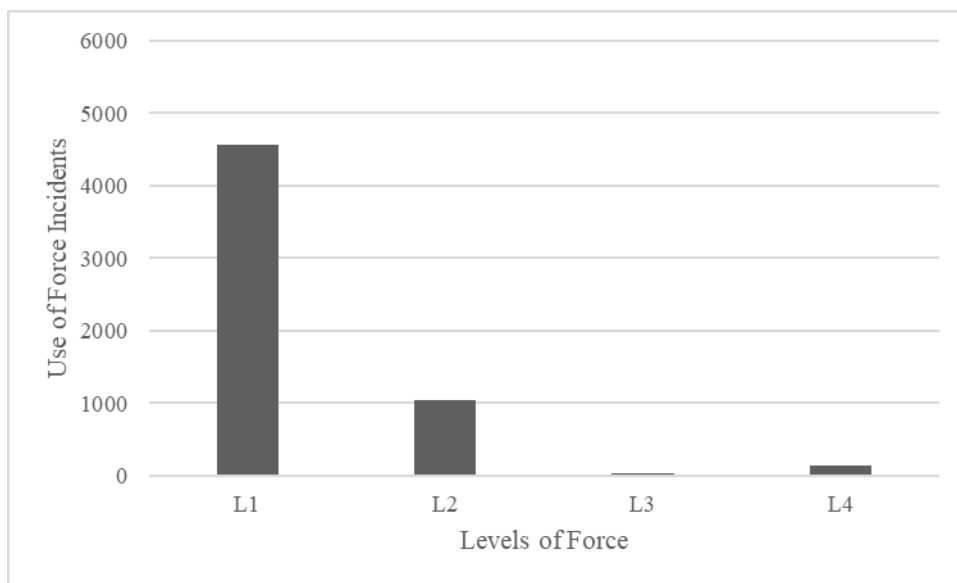
There are four levels of measurement for use of force in the dataset. The levels of measurement are categorized as L1, L2, L3, and L4. New Orleans Police Department's 2015 Operations Manual specifies the uses of force associated with these measurements. L1 had 4,959 (78.78%) incidents in the dataset (see Figure 2). The operations manual states that L1 or level 1 uses of force include, "pointing a firearm or CEW at a person and hand control or escort

techniques (e.g., elbow grip, wrist grip, or shoulder grip) applied as pressure point compliance techniques or that result in injury or complaint of injury” (New Orleans Police Department Operations Manual, 2015).

Level 2 or L2 of force accounts for 1,138 (18.08%) incidents in the dataset. This level of force includes the deployment of a CEW, the use of a weapon to strike a subject in incidents where no contact was made, the use of a baton for non-striking purposes, and weaponless defense techniques, including takedowns, elbow strikes, kicks, and leg sweeps (*New Orleans Police Department Operations Manual Chapter: 1.3 title: Use ... 2015*).

Level 3 or L3 of force appears in 40 (0.63%) of the recorded incidents within the dataset. Moreover, this level of force encompasses the following: any strike targeted to the head of a subject without weapon impact, and use of impact weapons when contact is made anywhere except for the head of the subject (New Orleans Police Department, 2015).

Level 4 or L4 is associated with 157 (2.49%) use of force incidents within the dataset. Furthermore, level four use of force includes all uses of lethal force, firearm discharges, uses of force resulting in hospitalization of subject or serious physical injuries, all neck holds, subject loss of consciousness, all canine bites, more than two discharges of CEW to one subject, any strike/blow/kick/CEW discharge against a restrained subject, and any vehicle pursuit resulting in death or other serious injuries (*New Orleans Police Department Operations Manual Chapter: 1.3 title: Use ... 2015*). Table 7 shows the different types of force used in the dataset’s incidents (see Appendix C).

Figure 2*Levels of Force Used by Officers**Use of Force Disposition*

This area within the data set reports on the justification of the force used. Incidents labeled as *use of force authorized* and *use of force justified* represent cases where the officer followed procedure with their interaction with the subject. In the five years covered by this dataset, there were 3,315 (52.66%) use-of-force incidents measured as “Use of Force Authorized” and 2,334 (37.08%) as “Use of Force Justified.” The rest of the incidents have fewer than two hundred occurrences each (see Table 1). Incidents labeled as justified with training refer to cases where the officer needs to be trained again on force because of the incident. Use of force justified with policy violation are incidents where the officer violated policy procedures before using force. The category of pending means that the case has yet to conclude a disposition of the incident. Use of force not justified, and use of force not authorized reflect on incidents

where the officer should not have used force. The remaining categories in the data set lack reportable force used by the officer. In order to narrow the sample from the targeted population, the classifications for use of force disposition were collapsed to *justified* and *not justified*. No value, UOF Complaint of Injury/No Reportable Force, Canceled, and blank entries within the column were not included in the sample size. 523 (8.30%) of the data points were eliminated from the sample due to a lack of specification of the officer's gender and disposition of force (see Table 5 Appendix A).

In preparation for conducting the chi-squared test, the disposition of force for the incidents within the dataset has been condensed to the following: Use of Force Authorized and Use of Force Justified were combined into one category labeled justified. Additionally, Use of Force Not Justified and Use of Force Not Authorized are displayed as not justified. Since dispositions such as justified with training and justified with a policy violation lacked sufficient detail to categorize them as justified or not justified, they were not included in the analysis.

Justified Definition

Justified dispositions are conclusions made by the police department's judicial process stating that the officer followed proper procedures in using force.

Not Justified Definition

Not justified dispositions are conclusions that find the officer's use of force to violate procedures.

Justification Definition

Justification for the purpose of this research is defined as the disposition of the officer's use of force.

Table 1*Disposition of Force*

Disposition	Count of Disposition
Use of Force Authorized	3312
UOF Justified	2326
UOF Not Justified	125
Use of Force Not Authorized	8
Grand Total	5771

Data Preparation

The New Orleans Police Department's records of police use of force were converted into the dataset provided by the City of New Orleans Open Data. Utilizing the software program SPSS, statistics are shown for the variables. The spreadsheets produced a single row for each use of force incident that included an officer's gender and justification of force used. Blank fields were removed since they were missing information pertaining to one or both variables. More specifically, 13 incidents were removed due to a lack of specification of officer gender; 21 dispositions were removed due to blank entries; 22 incidents were reported as no reportable force; 172 incidents were eliminated after being reported as use of force justified with training; 137 incidents were removed after being reported as use of force policy violation; six incidents were removed because they were reported as use of force injury; one was removed because it was labeled use of force; 126 were removed because their case status was labeled as pending; and 25 were removed because they were labeled as cancel FITFNT. Filter functions was used to remove blank fields pertaining to one or both variables, leaving 5,771 incidents.

The sample size of officers with gender demographics and justifiable/not justifiable use of force dispositions in this study was 5,771. Resulting in 91.69% of the incidents being included in the analysis. Table 6 reveals that the variable of officer gender was only identified in 5,771 (91.69%) of the incidents within the dataset (see Appendix A).

Investigation Status

New Orleans Police Department provided information on the status of the investigation into the use of force incidents by police officers. Different bureaux investigate all cases involving the use of force. There are several potential outcomes for every case/incident of force used by an officer. In the data set, these outcomes were reported as completed, meaning the case is closed. Suspended cases did not have enough evidence to proceed, and forwarded cases are to be investigated further.

Variables

Independent Variable

The gender of the officers.

Dependent Variable

The disposition of force used by officers, justified and not justified uses of force. The gender of the officer was coded as zero for male and one female. Use of force justified was coded zero and use of force not justified was coded as one.

Analysis

The variables officer gender and use of force disposition/justification in this study are nominal. Chi-squared was applicable in calculating the significant relationship between officer gender and disposition of use of force. Chi-squared is the chosen method for this research study because it tests the categorical variables to determine if a relationship exists between them or if

they are independent. Chi-squared is the right method for this research study because it projects more accurate results as the counts in the cells of the table are larger. The Statistical Package for the Social Sciences (SPSS) was used for the hypothesis testing.

Contrary to most statistics, when the variables are nominal, the chi-square (χ^2) can provide information not only on the significance of observed differences but also provides detailed results of which categories contribute to differences found. For the chi-square test of independence to be performed, there is a series of assumptions that need to be present. The chi-square test is a non-parametric statistic that should be used when any of the following assumptions pertain to the data. The assumptions that pertain to my research are the level of measurement of all the variables are nominal, and the sample size of the study groups is unequal (McHugh, 2013).

Hypothesis Testing

A chi-squared statistical procedure tested the alternative hypothesis. The chi-squared test for independence is a statistical hypothesis test used to assess the association between variables with large sample sizes as it would not work with small sizes (Kishore & Jaswal, 2023). An alpha level (α) of 0.05 was chosen as the cut-off for rejecting the null.

Strengths

The strength of this data is that it was a direct result of a federal oversight instructing departments to report use of force incidents. As a result, the New Orleans Police Department compiled a comprehensive database that was exhaustive to comply with federal oversight. This created an unbiased assessment of the police officer's use of force. The United States District Court of Louisiana entered a consent decree with the Department of Justice that contains tasks

and goals to achieve professional law enforcement practices (*United States District Court Eastern District of Louisiana, 2018*).

One of the sections in the consent decree report is devoted to use of force reporting. This section states that New Orleans Police Department will develop and implement a uniform crime reporting system pursuant to a use of force reporting policy, using a uniform supervisor use of force report that will include officer force incidents. Furthermore, the force used shall be divided into four levels. The strength of this study is the comprehensiveness of the database produced by this consent decree. Moreover, the data collection's reliability is the main strength of this study, which forms the foundation of the analysis.

Use of force in policing is presented to the public through many sources, research, media, and news broadcast. While past research has concluded many significant relationships using officer demographics and use of force statistics, current research has not been conducted looking at officer's gender and disposition of use of force. Establishing the significance or lack of significance in gender differences among police officers and their use of force may benefit future research. The need for additional research in this area is more important as more females are entering this field.

Limitations

While this study looked at gender differences in the justification of the use of force among police officers, the database did not allow for an assessment of the number of times individual officers were involved in incidents. Ideally, researchers would want to know if one officer was involved in multiple incidents of justified and unjustified uses of force. Additionally, it did not reveal how many incidents an individual officer was involved in over the five-year data collection. The limitation is that this data set has aggregate accounting of all incidents of use of

force, and the justification does not provide individual officer incidents. For example, readers of the dataset do not know if (Officer A) was involved in multiple incidents throughout the time frame. This also limited the ability to address outliers involved in the dataset. Due to the limited data found through the police department's websites, the targeted population was limited to New Orleans. The dataset for the New Orleans Police Department provided over five thousand incidents that contained both variables for the research study.

After reviewing multiple datasets from across the nation only a few contained variables of use for the study of officer's gender and use of force. With the purpose of utilizing already collected data from police departments, the research study observed relationships between already recorded variables within the dataset. Changes to the study limited the dataset to New Orleans because of the lack of consistency in variables within other departments' data.

The utilization of the data from 2016-2021 produced limitations of its own. Due to the inability to assess the impact of the changes in the use of force policy, the following actions were taken. As a part of the consent decree, NOPD constantly revised all the department's policies and regulations, which directly impacted the use of force encounters. The classifications of use of force with policy violation and use of force with training would be dispositioned differently because of these policy changes as well as other dispositions for classification. Since 2020, when the George Floyd case in Minneapolis, Minnesota occurred, various law enforcement agencies have implemented more officer training on the use of excessive force (*State vs. Chauvin*, 2021).

An additional limitation is the lack of specifications within the dataset on the force disposition classifications labeled as "Justified with Training" and "Justified with policy violations." Use of force justified with training had 173 (2.74%) incidents in the time frame of 2016-2021. Meanwhile, use of force justified with policy violations had 137 (2.17%) incidents.

The dataset does not provide enough specificity to make a determination if they could have been classified as justified or not justified for the purpose of the analysis. It is unknown if these incidents would be classified as unjustified or justified. Efforts were made to contact the New Orleans Police Department regarding this information. They indicated that a Freedom of Information Act request could be issued; however, they could not indicate if this information was available.

Results

Chi-Squared Results

Crosstabulations were used in this research study to show information pertaining to the variables. Furthermore, crosstabulations showed 568 (97.26%) females were justified in their uses of force, and 16 (2.73%) were unjustified in their use of force (see Table 3). Table 2 shows that 5,070 (97.74%) males were justified in their use of force dispositions, and 117 (2.25%) were unjustified in their dispositions. Table 2 shows that 10.1% of the justified cases were females, and 89.9% were males. Also, the table shows that 12.0% of females count for unjustified dispositions of use of force, and 88.0% of males account for unjustified dispositions.

Table 2

Crosstabs – Officer Gender & Disposition

			Officer Gender		Total
			Female	Male	
Disposition	UOF Justified	Count	568	5070	5638
		Expected Count	570.5	5067.5	5638.0
		% within Disposition	10.1%	89.9%	100.0%
	UOF Not Justified	Count	16	117	133
		Expected Count	13.5	119.5	133.0
		% within Disposition	12.0%	88.0%	100.0%
Total	Count	584	5187	5771	

	Expected Count	584.0	5187.0	5771.0
	% within Disposition	10.1%	89.9%	100.0%

Table 3*Crosstabulation – Disposition*

			Officer Gender		Total
			Female	Male	
Disposition	UOF Justified	Count	568	5070	5638
		Expected Count	570.5	5067.5	5638.0
		% within Officer Gender	97.3%	97.7%	97.7%
	UOF Not Justified	Count	16	117	133
		Expected Count	13.5	119.5	133.0
		% within Officer Gender	2.7%	2.3%	2.3%
Total	Count	584	5187	5771	
	Expected Count	584.0	5187.0	5771.0	
	% within Officer Gender	100.0%	100.0%	100.0%	

For this study's purpose, only Pearson Chi-Squared statistics were needed to determine if the null hypothesis can be rejected. The p-value for the chi-squared test is 0.460, which is larger than the alpha level of 0.05. Therefore, I fail to reject the null hypothesis (see Table 4). The evidence from Table 4 shows that there is not statistically significant evidence that the variables of officer gender and disposition of force are dependent.

$$\chi^2(1, n = 5,771) = 0.546, p = 0.460.$$

Table 4
Chi Square Test

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.546 ^a	1	.460		
Continuity Correction ^b	.352	1	.553		
Likelihood Ratio	.519	1	.471		
Fisher's Exact Test				.466	.268
N of Valid Cases	5771				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 13.46

b. Computed only for a 2x2 table

Conclusion

With the integration of more females into policing, it is useful to investigate the genders relationships with use of force. Past research investigating gender differences among police officers in the use of force has focused on factors leading up to the incident involving the force used. While these studies suggest that female officers are less likely to involve themselves in use of force incidents, research has not been conducted on the justification of the forced used by both male and female officers. The present study was unable to find any statistically significant differences in the justification for the use of force by male and female officers.

Further Research

In order to properly determine if a significant relationship between male and female officer's use of force dispositions exists, there would need to be a more comprehensive national use of force database. Moreover, the utilization of more data from across the nation could provide interpretations that one gender does or does not justifiably use force more or less than the other. Without a national database, future researchers would need to create a nationally representative database of use of force incidents from both large and small police departments.

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Appendix A**Table 5***Frequency Table of Disposition*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UOF Justified	5638	97.7	97.7	97.7
	UOF Not Justified	133	2.3	2.3	100.0
	Total	5771	100.0	100.0	

Appendix B**Table 6***Frequency of Officer Gender*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	584	10.1	10.1	10.1
	Male	5187	89.9	89.9	100.0
	Total	5771	100.0	100.0	

Appendix C

Table 7

Type of Force Used

Use of Force Type	Count of Use of Force Type
Firearm (Exhibited)	2592
Hands	1065
Force (Take Down)	562
Takedown (no injury)	337
CEW Exhibited/Laser	266
CEW Deployment	240
Force (Escort Tech)	137
Canine (No Bite)	113
Takedown (w/injury)	99
Rifle (Pointed)	89
Other	60
Vehicle as Weapon	48
Firearm (Discharged)	34
Head Strike (No Wep)	25
Force (Defense Tech)	23
CEW	19
Canine (Bite)	11
Handcuffed Subject	9
Shotgun (Pointed)	8
#NAME?	8
NonTrad Impact Weapon	8
Baton/PR-24(NonStrk)	5
Force (Neck Holds)	4
Baton/PR-24 (Strike)	3
Baton (non-strike)	3
Rifle (Discharged)	1
Baton/PR-24 (Miss)	1
Canine (Contact)	1
Grand Total	5771

Appendix D

Details of the Original Dataset

Effectiveness of Force

The effectiveness of force used by officers is categorized as true and false. The dataset states that there were 5,523 (87.75%) true incidents of use of force. In other words, the force used by the officer was effective. There are 721 (11.45%) incidents that account for false effectiveness of force, meaning the use of force used against the subject was ineffective. There are 50 (0.79%) incidents that were not reported as either true or false.

Reason for Use of Force

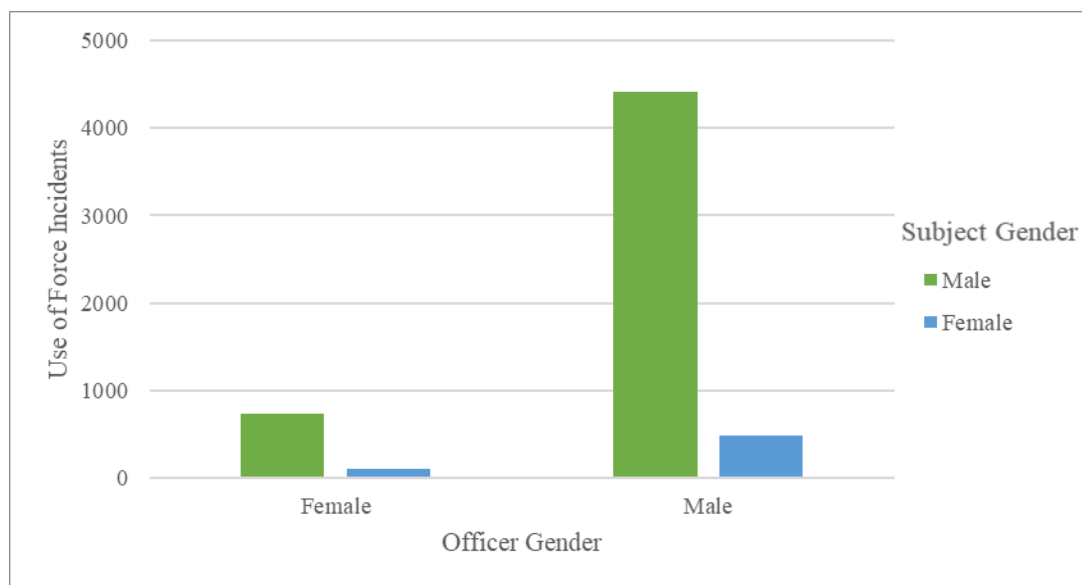
The dataset included twenty different reasons force was employed. Resisting lawful arrest is the leading category, with 1,810 (28.75%) incidents. The second highest incidents of force were due to refusal of verbal commands, with 1,280 (20.33%) incidents. There are 991 (15.74%) incidents categorized as others for the use of force reasoning. The category fighting with an officer had 810 (12.86%) incidents and the category tactical deployments had 328 (5.21%) incidents. Battery of a police officer accounted for 296 (4.70%) incidents and subject exhibiting a weapon resulted in 291 (4.62%) incidents. Resisting officer with weapon resulted in 228 (3.62%) use of force incidents. Subject escaping/eluding contributed to 174 (2.76%) incidents in the five years. The remaining eleven categories had less than 30 incidents each, including a no value category accounting for 14 (0.22%) use of force incidents.

Appendix E

Figures

Figure 3

Gender to Gender Interaction



Note. Counts on the y-axis measure use of force incidents with subject's y-axis. The green bars represent male officers' involvement, and the blue bars represent female officers.

Appendix F

IRB Approval Form



Institutional Review Board for the Protection of Human Subjects in Research 203

Angle Hall
700 Pelham Road North
Jacksonville, AL 36265-1602

September 28, 2023

Carma Dobson
Jacksonville State University
Jacksonville, AL 36265

Dear Carma:

Your protocol for the project titled "Use of Force in Policing: Do Female Police Officers Use Physical Force as Often as Male Officers" protocol number 09282023-02, has been approved by the JSU Institutional Review Board for the Protection of Human Subjects in Research (IRB).

If your research deviates from that listed in the protocol, please notify me immediately. One year from the date of this approval letter, please send me a progress report of your research project.

Best wishes for a successful research project.

Sincerely,

A handwritten signature in black ink that reads 'Sarah Donley'.

Sarah Donley
Human Protections Administrator, Institutional Review Board