An Analysis of the San Marcos Police Departments 2004-2005 Use of Force Data

by

Julie E. Kopycinski

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Faculty Approval:

_____
Dr. Patricia M. Shields

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Dr. Charles Garofalo

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Abstract

Research Purpose

The three research purposes presented in this paper are exploratory in nature. The research analyzes the subject's gender and race the San Marcos Police Department (SMPD) is encountering. It will also determine if there is a relationship between the subject's race and gender and the amount of aggression they display as well as the amount of force an officer uses. Finally, an evaluation occurs to if there is a relationship between the level of resistance shown and the level of force employed by the officer.

Method

This paper cites scholarly literature regarding the use of force to incorporate past research findings. The analysis is quantitative and utilizes statistical techniques, including frequency and Chi-square for Goodness of fit. The research analyzes existing data from the San Marcos Police Department for 2004 and 2005. The data-set contains 543 entries of force.

Findings

The findings indicate that the San Marcos Police Department interacts with White Males the most. However, there is no relationship found between race and the level of force officers display. There is a significant relationship found between race and the level of subject resistance. Hispanics use deadly force assault significantly more than the other races. In terms of resistance, females are significantly less likely to display psychological intimidation and verbal resistance towards an officer.   Officers are more likely to display a weapon when a subject exhibited defensive resistance. Defensive resistance also yielded the highest number of intermediate weapons[1] utilized.

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[1] Intermediate weapons refer to chemical agents, electrical tool, impact weapons and canines.

Chapter One
Introduction

The protection of society falls upon the police departments. Their main objectives are maintaining peace and ensuring safety. Police departments come under heavy scrutiny for their actions because officers are constantly in the public eye and have the potential to abuse their power. The San Marcos Police Department (SMPD) recognized this fact and wanted to review departmental data regarding their officers' use of force in the field.

Research Purpose

The overarching purpose of this study is to provide data analysis and formulate answers to the questions requested by the San Marcos Police Department regarding their use of force for the calendar years 2004 and 2005. The Department requested that the research address three specific areas:

1. Determine the demographic distribution of offenders and whether treatment by the SMPD differs across those demographics.

2. Explore the relationship between race and the use of force in terms of level of resistance and aggression demonstrated and the amount of control employed by the SMPD. The analysis will also look at each specific gender and determine the different levels of resistance displayed and the types of control utilized.

3. Explore the relationship between the six levels of resistance displayed by the subjects and the type of control the officers employ.

Examining the levels of resistance and the levels of control gives the SMPD an understanding of the common actions taken by their officers in response to the subject's resistance. From those three research questions requested by the SMPD, two categories

of Race and Gender are devised, along with five working hypotheses to analyze the data.

They are listed below:

> Categories: Race and Gender
>
> WH1: The degree of force used by the SMPD Officers depends on the gender and
> ethnicity of the subject.
>
> WH2: Racial groups demonstrate different levels of resistance/aggression.
>
> WH3: The degree of force used by the SMPD officers varies for male and
> female subjects.
>
> WH4: Male and female subjects demonstrate different levels of
> resistance/aggression.
>
> WH5: The level of control employed by police is influenced by the level of
> resistance shown by the subject.

Organization and Explanation of Research

This paper contains seven chapters. The following chapter gives information

regarding the SMPD and the demographics of the city. It also introduces reoccurring

terms that are found throughout the paper. Chapter three introduces the conceptual

framework, which outlines the literature regarding this topic. Chapter four reviews the

scholarly research on the use of force by police and the justification for the use of the

research components. The research methodology can be found in chapter five. Chapter

six presents and discusses the findings of the empirical research. Finally, chapter seven

summarizes the research and provides recommendations for future research as well as

recommendations to the San Marcos Police Department to improve its methods for

reporting its use of force

Chapter Two
Settings

Purpose

Before an examination of the literature begins, this chapter gives an overview of the demographics and population of San Marcos. It also introduces relevant terms as well as ideas associated with force. Reviewing the terms will help define and guide the analysis by providing an understanding of the key concepts used in both practice and scholarship. Some of these terms include what constitutes a "threat," how organizations define "force" and what is considered "excessive force." This chapter also presents background information regarding the duties of police officers and the accepted protocol for escalation of use of force.

San Marcos and the Police Department

The city of San Marcos sits halfway between Austin and San Antonio. According to the 2000 Census Bureau, San Marcos has a population of 34,733. Demographically, San Marcos is composed of approximately 57% Whites, 5% African Americans, 1% Asian, and 37% Hispanic individuals (U.S. Census Bureau 2000). Fifty-one percent of the San Marcos population is female making the population almost evenly divided between the genders.

"The San Marcos Police Department is comprised of 82 sworn officers and 25 civilian employees" (SMPD Website). All of their patrol units contain video cameras to record each stop made. SMPD requires their officers to complete annual in-service training regarding the use of physical force, the reporting requirements, and self-defense techniques (SMPD Policies and Procedures 2004). Additionally, supervisors conduct quarterly reviews of the video tapes used in police officers' patrol units to determine if

racial profiling occurred. During 2005, "the Department received no citizen complaints regarding racial profiling" (SMPD Website). The analysis given to the SMPD helps it better understand the issues that officer's face most frequently and determine potential problem areas.

Relevant Terms and Definitions

Several specific terms appear multiple times throughout the literature. This section clarifies those terms. Initially, an officer has a variety of options to use to gain compliance from an individual. When the officer's requests and commands meet resistance, the level of force escalates to gain control of the situation. Before an officer resorts to using physical force, he or she first "threatens" the individual. A threat "includes the display of readiness, as when the officer draws a club or a gun to make a possible course of action very clear" (Sykes and Brent 1980, 186). This "threat" warns the other party of alternatives if non-compliance continues. Alternative action usually occurs when neither commands nor questions to the subject produce the intended results (Sykes and Brent 1980, 185). Scholars and police organizations consider a "threat" a degree of force because officers display their weapons and employ verbal control mechanisms.

Terrill (2005, 115) identifies a generally accepted definition of "force" as an act that "threatens or inflicts personal harm on citizens, which includes forms of both verbal and physical force." The difficulty lies in establishing a common foundation regarding the varying degrees of force. The problem is determining where one level ends and another begins and when an officer has gone too far. Researchers establish levels that are most beneficial to their research and analysis making it difficult to establish a uniform standard. An officer can legally escalate to the next level if subject hinders an officer

from gathering information, fails to effectively respond to the officer's questions and threatens, or reacts against the officer (Terrill and Mastrofski 2002, 231). A review by Garner, Maxwell, and Heraux (2002, 713), finds over fifteen different measurement techniques suggested by other researchers. Each researcher examines different jurisdictions and police departments and encounters different data collection techniques used by police departments.

A majority of terms used by policy departments offer no concrete definition. This causes interpretation problems for researchers, departments, and the public, because each group determines its own definitions and standards. The "reasonable person" approach, another term without clear definition, currently guides how much force an officer should use. The International Chiefs of Police adopted this standard and justify the actions of a particular officer based on what actions a "reasonable officer" would employ in a similar situation. The problem with this standard lies in that it does not dictate exactly what constitutes "reasonable" and thus leaves the door open for interpretation, making it very hard for police departments to establish rules and regulations to lessen the likelihood of the misuse of force by their officers. The Texas Commission on Law Enforcement Officer Standards and Education (TCLEOSE 2006) states that "reasonableness is based on individual facts and circumstances of the situation." The vagueness of this definition also makes it difficult for police organizations to identify and discipline officers who might be abusing force.

Police Departments and researchers have trouble determining when force is "reasonable" and when it crosses to "excessive force." Because "excessiveness is in the eye of the beholder," it makes it very difficult to label and dictate what is excessive in certain situations (Lindgren 1981, 112). The same ambiguity found in the definition of

"reasonable" also applies to the definition of "excessive force". The SMPD, in Section 220.1.2 of their Policies and Procedures (2004) describes excessive force as "any use of force greater than that reasonable to gain compliance." Carl Klockars defines "reasonable and necessary" as not using "any more force than a highly skilled police officer would find necessary to use in that particular situation" (as cited in Alpert and Smith 1994, 489). The term contains the undefined "highly skilled officer" then waters down the definition further by using a vague standard of necessity. Alpert and Smith (1994, 491) address this problem and state the necessity for the "creation of a standard to measure how a reasonable police officer should act and be judged, rather than setting the stage for a rear-view mirror analysis of what has transpired." Police departments and organizations have the duty to establish rules and guidelines for their officers in order to ensure they use the appropriate amount of force (Wortley 2003, 556).

By exposing the shortcomings of a number of these definitions, this study draws attention to the need for a set of well-defined, more concrete standards for officers to follow. These current, ambiguous guidelines force police officers to use their own discretion when they confront different situations.

Chapter three outlines and discusses the type of research framework that is used during this study. Table 3.1 displays the Research Purposes and details the categories and working hypotheses.

Chapter Three
Conceptual Framework

Purpose

This chapter provides an outline of the research purposes and the scholarly literature used. The nature of this research is exploratory, based on a set of questions asked by the SMPD. The chapter establishes two frameworks to answer these questions. Since the "choice of the conceptual framework is directed by the nature of the problem," **descriptive categories** and **working hypotheses** are used. (Shields and Tajalli 2005, 6). A narrative description of the conceptual framework follows and Table 3.1 provides a summary.

Categories

The first research question, as outlined in chapter one, specifically focuses on the demographics of offenders, and analyzes them using the **descriptive categories** of gender and race. These categories provide only the number of each type of category that the SMPD encounters and not any relationship.

Working Hypotheses

Research purposes two and three are answered using **working hypotheses**. These working hypotheses are "statements of expectations" and they "direct inquiry because they help to establish a connection between the research question and the type of evidence used to test the hypotheses" (Shields and Tajalli 2005, 14). The working hypotheses, found in Table 3.1, formulate "a belief about the direction of inquiry but not necessarily its ultimate destination" (Shields 1998, 211). The data suggests a relationship between the amount of aggression demonstrated and the amount of control employed, and between force and the subject's race and gender. Working hypotheses are supposed

to have "wide applicability" and be "an organizing device that easily crosses the boundary into the everyday world" (Shields and Tajalli 2005, 22). The working hypotheses generated for this research do more than just organize the literature and evidence. They carry over from research into reality because the results of the findings are shared with the SMPD and changes in policy and training could occur. Table 3.1 links the literature to the categories and the working hypothesis.

Chapter four presents the supporting literature for the conceptual frameworks. It discusses an officer's discretionary power because of the impact it can have upon police encounters.

Table 3.1
Research Purposes and Supporting Literature

Research Purpose 1: Describe the types of offenders the SMPD encounters

Descriptive Categories	Source
Offender Characteristics	
Gender	Alpert and Dunham (1999), Crawford and Burns (2002), Freeman (1996), Friedrich (1980), Garner, Maxwell, and Heraux (2002), Halim and Stiles (2001), Worden (1989), Engel, Sobol, and Worden (2000), Goldstein (1967), Terrill and Mastrofski (2002), Freeman (1996)
Race	

Research Purpose 2: Explore the relationship between the use of force and race and gender in terms of level of resistance/aggression demonstrated and the level of control employed by the SMPD.

Working Hypothesis	Source
WH1: There is a relationship between race of a subject and the level of force employed by the police officers.	Alpert and Dunham (1999), Crawford and Burns (2002), Freeman (1996), Friedrich (1980), Garner, Maxwell, and Heraux (2002), Halim and Stiles (2001), Worden (1989), Engel, Sobol, and Worden (2000), Goldstein (1967), Terrill and Mastrofski (2002), Freeman (1996)
WH2: There is a relationship between the race of the subject and their level of resistance/aggression.	
WH3: There is a relationship between the gender of the subjects and the level of force employed by the police officers.	Alpert and Dunham (1999), Crawford and Burns (2002), Freeman (1996), Friedrich (1980), Garner, Maxwell, and Heraux (2002), Halim and Stiles (2001), Worden (1989), Engel, Sobol, and Worden (2000), Goldstein (1967), Terrill and Mastrofski (2002), Freeman (1996)
WH4: There is a relationship between the gender of the subjects and the level of resistance/aggression.	

Research Purpose 3: Explore the relationship between the 6 levels of resistance and the type of control employed.

Working Hypothesis	Source
WH1: The level of control employed by police is determined by the level of resistance shown by the subject.	Alpert and Smith (1994), Engel, Sobol, and Worden (2000), Friedrich (1980), MacDonald, Alpert, Mariz, and Dunham (2003), Sykes and Brent (1980), Terrill and Mastrofski (2002), Crawford and Burns (2001), Garner, Maxwell and Heraux (2002)

Chapter Four
Literature Review

Purpose

The design of this chapter provides support for the conceptual framework

established at the end of chapter 3. It provides an examination of the literature regarding

the use of force. The following discusses police discretion, various stages of force used

by police organizations, and past research findings. Specifically, this chapter investigates

a subject's gender, race, and resistance in relation to the level of police force used. The

chapter concludes by discussing research limitations and weaknesses to draw attention to

potential research areas.

Discretion and the Role of Police

Guidelines and procedures set forth by departments guide police in their daily

action, but they do not always provide information about the action an officer should

take. Uninformative guidelines mean "discretion is an inherent part of the policing role"

(Wortley 2003, 556). Even if an officer wants to follow every rule, some decisions are

still made based solely on their subjective view. Police determine what situations need to

incorporate force and which individuals should be on the receiving end. Egon Bittner

states it is the function of the police to distribute "situationally justified force in society"

(as cited in Lindgren 1981, 112).

The subjective power of police officers has made police use of force an important

research topic. Because of the daily interaction between police and citizens, the negative

consequences of subjective force can be great (Crawford and Burns 2002, 106). The

number or lawsuits brought against police officers is on the rise (Gundy 2003, 61). There

is an increased spark of interest among researchers in this field due to violence and riots

that result from police-citizen interactions. The media takes an active role in reporting

abuses of police force. Media stories of police brutality affect the relationship between

the police and citizens (Adams 1999, 2). The media plays an influential role because

networks determine the amount of coverage and type of story to broadcast. The public's

perception of police organizations is skewed because the media provides extensive

coverage of rare cases of abuse of police power (Gundy 2003, 61). It is possible to create

a more realistic view of police force by   understanding the demands of an officer's line

of work and the regulations that guide officers.

Adams (1999, 1) believes in the importance of continuing research in this area

because an officer's line of work carries "the power to deprive a person's 'life, liberty,

and the pursuit of happiness' at a moment's notice." A double edged sword occurs due to

an officer's line of work: if he or she fails to arrest or use force against someone that

would be considered justifiable, they are not questioned; however, if officers arrest or use

force against an individual, then reviews and questions ensue, verifying the legitimacy of

their actions (Reiss 1980, 124). If an officer does come under review, Petrowski (2002,

25) maintains that officers are "uncertain about what force options were permissible

under the law or departmental policy." This uncertainty can be the source for

"compensating behavior[2]" (TCLEOSE 2006). Since there is no guideline dictating an

officer's actions, the officer must use personal judgment. These situations require officers

to have a keen knowledge of human beings and control the public with very little force

(Terris 1967, 67). Without this knowledge, officers hesitate, winding up in harm's way.

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[2] "Compensating behavior may take one of the following forms: hesitation, verbal abuse, bluff, unnecessary force" (TCLEOSE 2006)

Force and Situations

This section provides examples of justified situations where officers can use force. An officer receives little information to assess a situation when an initial call comes in. "Officers rarely know exactly what they encounter when they arrive at the call" (MacDonald *et al.* 2002, 119). Decisions necessary to limit harm to the subjects and ensure officer safety occur in an instant. "Information required for the making of careful decisions is not always readily available, nor is it always possible to consult with superior officers when guidance is needed," which makes an officer's decision tougher (Goldstein 1967, 161). Officers must rely upon accumulated cues and trust their assessment of the person (Waegel 1984, 148). In some cases, police officers make a decision with nothing more than a second to process, comprehend, and employ a level of force. Hence, "police must be prepared to use force under circumstances in which its rationale is often morally, legally, and practically ambiguous" (MacDonald *et al.* 2002, 119).

Acceptable Situations

Numerous articles exist on the different "acceptable" situations which permit an officer to employ force. Adams (1999, 5) suggests that an officer may use force "when it is necessary to enforce the law or to protect themselves or others from harm." Terrill (2005, 109) maintains that the "appropriate amount of force is that which is reasonably necessary to achieve compliance." There is no definition of "reasonable" and this intensifies the ambiguity. Besides the subject's safety, an officer is also concerned with their own safety, but there needs to be more clearly defined situations that justify force.

Alpert and Smith (1994, 492) have a three-tier process for officers to follow while making decisions. If enough time exists, officers need to follow the sequence ensuring the least amount of force and violence. Prior to contact with an individual, the officer

should assess the scene and accumulate information based upon review of the situation. The second tier begins as the officer confronts the individual and encounters problems. An assessment of the subject's volatility occurs to understand the type of person. Finally, in the third tier, the officer processes the information and decides whether or not to employ force and to what degree. The Alpert and Smith approach contains a flaw because it does not consider split second decision making or situations with little initial information.

Use of Deadly Force

An officer's discretion determines the amount of non-lethal force to use. However, when an officer wants to employ deadly force, certain rules must be followed. There are a number of cases that justify deadly force. Lindgren (1981, 116) presents two simplified situations: a fleeing felon or threat to an officer's life. Stock (1998, 4) expands this list to include situations of preventing a felon from escaping custody, capturing a felon, or arresting a felon. Additionally, the use of deadly force has been reviewed and upheld by the Supreme Court. Petrowski (2002, 27) discusses the Supreme Court case of *Graham v. Connor* which cites two justifications for the use of force. These include responding to a subject's threat on the safety to the officer and preventing the escape of a criminal. In reference to the San Marcos Police Department,

> "Deadly force shall only be used when an Officer reasonably believes that
> a person's actions place another person, including the officer, in imminent
> danger of death or seriously bodily injury and that a lesser degree of force
> will be inadequate to eliminate or control the danger" (Section 220.4.1
> SMPD Policies and Procedures).

An officer can use deadly force in predetermined circumstances, but in other non-lethal situations an officer must establish boundaries. Officers can do this by looking at a Use of Force Continuum and following the escalation levels.

Use of Force Continuum

Different levels of force exist when an officer decides to use force. Distinguishing between those levels "is best understood when conceived and measured along a continuum according to the severity of harm it imposes on citizens" (Terrill and Mastrofski 2002, 225). The use of force continuum was developed in the late 1960s by law enforcement trainers who wanted to teach officers how much force they could use and when (Williams 2002, 14).

Most police departments score the various types of force on a scale referred to as a Use of Force Continuum. These continuums, however, are not required by law. Police departments measure their officers' actions against this norm-based standard and determine if the action is appropriate and justifiable (Terrill 2005, 110). The continuum identifies a degree of subject resistance, categorizes it, and specifies the appropriate level of police force (Terrill 2005, 108). Police departments utilize the continuum "as a guideline that promotes police escalation of force in 'small increments'" (Terrill *et al.* 203, 154). There is no standard use of force continuum used by police departments. Departments design its own continuum and adjust it according to their specific needs. Police departments obtain and analyze force information through completion of a use of force report. These forms generally have check boxes that officers fill out and consist of very little space for an officer to write an explanation or narrative (Williams 2000, 71). These reports rely upon the officer accurately reporting their actions. The main problem with these forms, as state above, is the small amount of space that an officer is given to

explain or justify their answers. Simply checking a box provides "an out-of-context listing of the force used without any of the justifying factors" (Williams 2000, 73).   The form does not reflect the possible fear that the officer experiences, the rapid unfolding of the events or the true violence of the subject.

Departments choose when to have their officers complete these forms and some only require completion when serious bodily harm occurs or an intermediate weapon (chemical agent, electrical tool, or impact weapon) is used. Most police departments make officers document all uses of force regardless of the severity (Terrill *et al.* 2003, 152). According to a report by the San Marcos Chief of Police on February 21, 2006,

> "The San Marcos Police Department Policies and Procedures Manual requires an officer to complete a Use of Force Report in the following situations:
>
> 1. during the application of force, when a firearm is discharged;
>
> 2. when a use of force technique results in, or is alleged to have resulted in , death or injury to any person;
>
> 3. when a less-lethal weapon is used against a person;
>
> 4. when a Department canine causes injury or death to any person, or is alleged to have caused injury or death; or
>
> 5. when use of force is required beyond the application of handcuffs" (Williams 2006).

Police actions are then quantified so police departments and researchers can analyze the data and identify any discrepancies that exist. These forms also help assess "the propriety and reasonableness of a use of force by officers, as well

as aiding in tracking a particular officer's history in the use of force" (Williams 2000, 71). From there, guidance and training can be provided to officers.

Stages of the Continuum

Stock, Borum, and Baltzley (1998, 9-11) present an example of options for an officer to choose from, citing ten levels of force. The first two, social control and verbal control, refer to the body language and commands that officers initially use to gain control of a situation. The continuum escalates to weaponless control tactics and stunning techniques, designed to shift the attention of the subject from the officer to the area of pain. The next three tactics provide a more lasting effect. Direct techniques, neck restraints, and electrical shocking devices are less than lethal but produce significant damage to the subject. If the situation warrants escalation, officers can use chemical agents or impact weapons, such as tear gas or batons. Finally, the officer may use a firearm. An officer must try to get the subject's compliance through every other technique, but if this cannot be done, they have to escalate to a higher degree of force. This example establishes a typical continuum in a police organization and how to move along the continuum. The San Marcos Police Department's continuum is located in Chapter 5, Table 5.3.

As research on the subject becomes more prominent so does the scholarly use of continuums. The purpose of continuums becomes two-fold. It guides officers in decision-making determining the appropriate forms of action and the continuum analyzes police actions. Researchers use the continuum to examine how officers use force and determine the appropriateness (Terrill 2005, 135). By using force reports, researchers "identify instances when an officer fails to escalate or deescalate force in relation to citizen resistance" (Terrill *et al.* 2003, 158).

Researchers perform a number of studies generating quantitative data on the amount of force police organizations use. "Fortunately, police use of force is a relatively rare event" (MacDonald *et al.* 2003, 120). In a study by MacDonald *et al.* (2003, 121), the researchers report that the amount of force that occurs in police organizations is generally at the low end of the spectrum and involves minimal amount of actual physical contact. Garner and Maxwell also have a study that examines 6,328 arrest cases in 6 jurisdictions. Their analysis reports that approximately 84% of those cases involve a weaponless control tactic (Garner and Maxwell 1999, 32). "Typically, [when officers use force], no weapon is used, threatened or even displayed" (Garner and Maxwell 1999, 25). Additionally, data found in the TCLEOSE training manual (Texas Commission on Law Enforcement Officer Standards and Education) reports that "97% of an officer's duties involve verbal skills and approximately 3% of contacts require physical force" (TCLEOSE website). A report by the Seattle Police Department states that "under 1% of citizen-police contacts involve the use of force" and when officers do use force, it is at the low end of the spectrum. They use their hands or fists 87% of the time and only use a firearm 5% of the time. (SPD Special Report on the Use of Force).

Exploration of the amount of force used and an understanding of an officer's use of the continuum is important to researchers. "The objective is to determine how officer's move up and down the continuum, and what factors may explain that behavior" (Terrill 2005, 114). A primary benefit of the continuum is allowing researchers to examine the differences between officers and the incrementalist approach of escalating and deescalating (Terrill *et al.* 2003, 162). Additionally, it allows analysis of the types of offenders. Scholars examine the relationship between subject characteristics and how officers move along the continuum.

Limitations

Not every scholar supports a Use of Force Continuum. Thomas Petrowski is adamantly against the implementation and use of continuums in police organizations. He maintains that "the force continuum can be superficially very attractive" (Petrowski 2002, 29). From an outsider's perspective, the continuum appears to be helpful by providing direction to officers. However, Petrowski believes an organizationally implemented force continuum influences officers' decisions to be mechanical rather than subjective. An officer has an increased chance of being injured because he or she is thinking about what needs to be done according to the continuum to avoid an investigation later. Regardless of the research police departments use a continuum daily. Once departments establish a continuum, they can determine if a certain level of resistance, gender, or race is more inclined to receive a higher degree of force.

George Williams is another scholar that is against the implementation of use of force continuums. Williams believes that the use of force continuum was developed by a group of trainers "who sincerely desired to assist officers in properly employing force" (Williams 2002, 14). He states, however, that continuums have come to "only lead to experimentation, tentativeness, and hesitation in the field by officers" (Williams 2000, 74). He goes on to state that they are unrealistic and almost wishful (Williams 2002, 14). Williams does provide alternatives to the use of force continuum in his research stating that parameters need to be established and legal aspects need to be taught to officers. By doing this, officer will be more confident in their actions and face fewer injuries and less liability (Williams 2002, 18).

Level of Resistance vs. Level of Control

For a variety of reason, subjects may receive force. The San Marcos Police Department restricts the use of force to "only that force necessary to control and terminate unlawful resistance, to affect a lawful arrest, to prevent injury to any person or to prevent the escape of a person in custody" (Section 220.1.1 SMPD Policies and Procedures). The use of force also depends on the offense the subject commits and their resistance thereafter. Table 4.1 is a summary of researcher findings followed by a brief explanation of each.

Table 4.1
Resistance vs. Control Research Overview

Authors	Study	Year	Findings
Alpert and Smith	How reasonable is the reasonable man?: Police and excessive force	1994	The seriousness of the offense is related to amount of force
Friedrich	Police use of force: Individuals, situations, and Organizations	1980	Police respond in the same manner they are confronted with
MacDonald, Manz, Alpert, and Dunham	Police use of force: Examining the relationship between calls for service and the balance of police force and suspect resistance	2003	The subject's offense is related to the officer's response
Sykes and Brent	The regulation of interaction by police: A systems view of taking charge	1980	As compliance is not being gained, the amount of force used increases
Terrill and Mastrofski	Situational and officer-based determinants of police coercion	2002	Less suspect resistance equals less police force used

Seriousness of Offense

In their research, Alpert and Smith (1994, 494) develop a theory that "the seriousness of the offense will determine the amount of force which can be justified." If the officer uses a less forceful approach in a situation and the subject responds with an advanced action, the officer has no choice but to escalate to the next level and apply more force. Additionally, an officer is more likely to respond in kind to the type of action the subject confronts them with. MacDonald *et al* (2003, 121) also maintain that the seriousness of the offense directly correlates with the response of the officer, and "the more serious the call, the greater likelihood of a physical confrontation between officer and citizen." This idea is also supported by Durose, Schmitt, and Langan (2005, 19) who find that people are significantly more likely to experience force by an officer if they engage in a behavior that provokes the officer.

A study by Sykes and Brent (1980, 186) identifies four goals officers attempt to reach responding to a disturbance. The goals are information, order, respect, and resolution. These two scholars conclude that as the number of violated goals increase, so will the amount of force used by the officer. Sykes and Brent (1980, 188) also state the "officer will use that type of regulation consistent with the disturbance." Another set of researchers, William Terrill and Stephen Mastrofski (2002), did analysis on over 3,116 police-suspect encounters in the Indianapolis, Indiana and St. Petersburg, Florida regions. Findings show that officers are less likely to use force when a suspect is not resistant. Approximately 16% of police-subject encounters use some type of force when subjects are non-resistant (Terrill and Mastrofski 2002, 240). They conclude that the level of force employed and amount of subject resistance are related and "situational aspects of the police-citizen encounter drive officer's behavior" (Terrill and Mastrofski 2002, 243).

Suspect Attitude and Demeanor

Not only does the type of offense and level of resistance determine the level of force but so does the subject's attitude and demeanor. Crawford and Burns (2001, 111) argue that "in general suspect variables are most predictive of arrest resistance." Garner, Maxwell and Heraux (2002) analyzed fifteen scholarly studies performed concerning police use of force. Garner and colleagues report that "a suspect's demeanor is the characteristic that has been most consistently tested and consistently found to be associated with police use of force" (Garner, Maxwell, and Heraux 2002, 719). The researchers conclude that "the odds of the police using physical force increase by 163%" when a suspect displays an antagonistic demeanor towards police rather than being civil (Garner, Maxwell, and Heraux 2002, 738).

Crawford and Burns (2002) find supportive evidence for this as well in their research. An analysis of data collected in the Phoenix, Arizona Use of Force Project contained 1,585 arrests. Crawford and Burns (2002, 111) conclude that "suspects with an angry or aggressive demeanor were more than ten times as likely to resist arrest." When a subject becomes more disrespectful and uncooperative, the higher the chances are that an officer uses a degree of force (Crawford and Burns 2002, 108). Engel, Sobol, and Worden (2000) also support this theory. They analyzed the Police Service Study of 1977 which consists of data from twenty-four police departments in New York, Missouri and Florida. Engel *et al.* conclude that a "suspect's demeanor is a statistically significant predictor for police use of force" (Engel, Sobol, and Worden 2000, 249). Those suspects who display verbal resistance are 5.8 times more likely to be on the receiving end of police force (Engel, Sobol, and Worden 2000, 249). After examining the literature, there

is strong evidence to support the idea that the amount of resistance a subject displays is positively correlated to the amount of control that an officer uses.

Gender and Race

The relationship between force by an officer and suspect's race and gender receives mixed reviews. "Legally, officers are expected and required to respond to citizens' 'actions,' rather than 'traits,' and to act only on those actions that bear a legal justification for force" (Terrill and Mastrofski 2002, 217). This, however, is not always the case. Numerous researchers find a significant relationship between the demographics of subject and the use of force, while other scholars cite no significant relationship. Table 4.2 summarizes the researchers' findings.

Table 4.2
Gender and Race Research Overview

Authors	Study	Year	Findings
Liska and Yu as cited in Halim and Stiles 2001 Project	Differential support for police use of force, the death penalty, and perceived harshness of the courts: Effects of race, gender, and region	1992	Force is concentrated on those of minority background
Crawford and Burns	Resisting arrest: Predictors of suspect non-compliance and use of force against police officers	2001	History of force against minorities
Freeman	Why do so many young american men commit crimes and what might we do about it?	1996	More men commit crimes therefore higher amount of men receive force
Goldstein	Administrative problems in controlling the exercise of police authority	1967	The less competent subject receives force
Terrill and Mastrofski	Situational and officer-based determinants of police coercion	2002	Cultural and economic factors control force
Garner, Maxwell and Hearux	Characteristics associated with the prevalence and severity of force used by the police.	2002	Men receive more force than women
Worden	Situational and attitudinal explanations of police behavior: A theoretical reappraisal and empirical assessment	1989	Economic and cultural differences control force

Minorities

According to Liska and Yu (1992), law enforcement "reflects the interest of the powerful and law enforcement is disproportionately concentrated on ethnic minorities and lower classes" (as cited in Halim and Stiles 2001, 5). Additionally, Crawford and Burns (2001, 108) state that "there exists a long and disturbing history of police

interactions and violence against minorities. As a result, ethnic minorities experience a higher number of forceful incidents with police than Caucasians. Richard Freeman (1996) maintains that force against men and minorities increases due to the number of these group members committing crimes. He performs a study that examines the number of men who commit crimes and the impact that it has on society. As of 1993, "about 7% of black men over [the age of] 18 were incarcerated" and "a total of 1,350,500 [men] were incarcerated" (Freeman 1996, 26).

Goldstein (1967, 167) believes the least competent individuals receive the most amount of force. People who are unaware of the steps to submit an officer complaint are larger targets for police abuse. Terrill and Mastrofksi (2002, 217) also support this theory and state that police are more forceful towards people of lower economic or cultural status. Unfortunately, specifics for race and gender were not provided in that research.

Police force against particular races or gender is found in a number of studies. Garner, Maxwell, and Heraux (2002, 737) analyze other researcher's data and conclusions maintain that "police use more force against male subjects than among female subjects, and these effects are all statistically significant." Worden, also presents information on police behavior, noting that "suspects who are male, black, lower class, young, antagonistic, and under the influence of alcohol are more vulnerable to formal action" (Worden 1989, 686). A study by the U.S. Department of Justice, Bureau of Justice Statistics found that in 2002, "the rate of police-resident contact for whites was about 15% higher than for blacks and about 26% higher than for Hispanics." Additionally, "the rate of contact for males was about 20% higher than for females" (Durose etc 2005, iv).

Alpert and Dunham (1999, 52) present an interesting theory that officers tend to use more force against members of their same ethnic background. Officers feel comfortable using force on a subject from their own ethnic group and are concerned about the legal liability and repercussions of using force on a person of a different race. If confronted with a person of a different race, the officer may avoid the situation. Unfortunately, no other research was found that could support or counter this theory.

Opposing Arguments

Not all research supports a relationship between subject race and gender regarding the amount of police force used. Friedrich (1980, 91) remarks, "if *what* offenders do has an appreciable impact on how the police treat them, *who* offenders are seems to matter much less." Robert Friedrich's research indicates that whites and blacks receive almost identical rates of force. Additionally, there is no evidence to support differential treatment between males and females (Friedrich 1980, 91). Other research by Engel, Sobol, and Worden (2000) also supports Freidrich's conclusion. Engel et al. conducted research analyzing two different categories of people: traffic subjects and non-traffic subjects. When analyzed collectively, there is no difference in the in the treatment of males, females, blacks or whites (Engel, Sobol, and Worden 2000, 256). Some research does find support for gender and racial bias but when controlled for various attributes, there is no significance. An example is the research by Garner and colleagues. Initially, Garner *et al*. find African American subjects are more likely to receive force than Caucasians, however, after controlling for subject resistance, there is no longer a statistically significant difference between the amount of force and race (Garner, Maxwell, and Heraux 2002, 737). Overall, the examination of literature for racial and gender bias produces mixed results. Therefore, it is not appropriate to say whether race

and gender affects police use of force without further research and a standard for evaluating police actions.

Limitations

Scholarly research is not without limitations and the need for new research perspectives. A limitation cited is the lack of concrete knowledge that police use or abuse force. The lack of concrete evidence stems from the dependency upon officers to accurately and honestly report their use of force. Kenneth Adam's (1999, 10) report for the National Institute of Justice discusses the current knowledge about police use of force. He states that "the incidence of wrongful use of force by police is unknown. Research is critically needed to determine reliability, validity and precisely how often transgressions of use of force powers occur" (Adams 1999, 10). A need exists for an establishment ways to ensure accurate reporting by officers.

Additionally, Stock, Borum, and Baltzley (1998, 5) identify hurdles existing for current researchers. These include the reporting systems police organizations utilize, defining key terms, reliance upon the use of force continuum, and the accuracy of reporting rates. The nature of the call (why the police are dispatched) is an area that needs further research. MacDonald et al. (2003, 121) notes that "there is a conspicuous lack of research on the relationship between calls for service and police use of force." Background information could provide special circumstances that were previously unknown. Future research should be conducted on the effect of the officers' training, race, and gender to determine if there is a relationship between those attributes and the degree of force used.

Finally, there are an overwhelming number of hypotheses regarding the use of force; however, the evidence to support them is missing (Friedrich 1980, 85). Police use

of force needs further research and analysis to support the scholarly theories. He maintains that research examines only one factor and does not take consider other possible factors making the results incomplete.

Conclusion

The way police officers utilize their discretion and power to use force upon an individual has become important not only to researchers but to the general public as well. This chapter intends to examine the literature of previous scholars and provide an overview of the different perspectives relating to this subject. This chapter also establishes different aspects of police force which needs further analysis. Chapter 5 discusses the data and methodology used to evaluate the San Marcos Police Department's use of force.

Chapter Five
Methodology

Purpose

This chapter provides information on the 2004 and 2005 SMPD data and

discusses the collection, the components, and the consolidation of the data, as well as the

research design and statistical techniques used. Table 5.1 illustrates the

operationalization of the three research areas and links them to the statistical techniques

performed. A discussion and overview of each technique follows the table.

Table 5.1
Operationalization of the Research Purposes

*Research Purpose 1: Describe the types of offenders that the SMPD is encountering

Categories	Statistic Used
Gender Race	Frequency and Chi-Square Test for Goodness of Fit

*Research Purpose 2: Explore the relationship between the use of force and race and gender in terms of level of resistance and aggression demonstrated

Working Hypotheses	Statistic Used
WH1: There is a relationship between the race of the subjects and the level of force employed by the police officers.	
WH2: There is a relationship between the race of the subjects and their level of resistance/aggression.	Chi – Square Test for Goodness of Fit
WH3: There is a relationship between the gender of the subjects and the level of force employed by the police officers.	
WH4: There is a relationship between the gender of the subjects and their level of resistance/aggression.	

*Research Purpose 3: Explore the relationship between the six levels of resistance and the type of control employed by the SMPD

Working Hypothesis	Statistic Used
WH1: The level of control employed by police is determined by the level of resistance shown by the subject	Chi – Square test for Goodness of Fit

Research Design

Archival data analysis provides the foundation for the operationalization of the research questions. The SMPD already has the existing data with the pertinent information. Archival data analysis is a strong methodology because it provides quantitative data that lends itself to analysis and retesting.

Data Source

The research examines the SMPD's data for 2004 and 2005. The data contains every force and aggression level that can be demonstrated. The overall number of entries is 794. The Chief of Police states, "it is important to note that any specific incident could involve one officer and one citizen, one officer and several citizens, several officers and one citizen, or several officers and several citizens" (Williams 2006). Some of the data file consists of multiple entries for the same case; entries with the same case number and the same subject were collapsed into one entry. This allows every individual to be counted only once per incident. Table 5.2 provides an example of the coding system

Table 5.2
Data Coding System

Original Data

Incident Number	Subject	Verbal Resistance	Defensive Resistance	Active Aggression	Officer
113-06	John Doe	Yes			A
113-06	John Doe		Yes	Yes	B
113-06	John Doe	Yes		Yes	C

Final Coding

Incident Number	Subject	Verbal Resistance	Defensive Resistance	Active Aggression
113-06	John Doe	Yes	Yes	Yes

By organizing the data using the collapsed cell method, the final set contains 543

cases. The data was transferred from Microsoft Excel into SPSS for analysis. The data

set consists of the subject's race and gender, the six levels of resistance, and the four

levels of force. Table 5.3 shows a breakdown of the different levels of resistance and

control that the SMPD uses and is taken from their use of force report form.

Table 5.3
Subject's Level of Resistance vs. SMPD Level of Control

Levels of Subject Resistance	Ex. Of Types of Action
Psychological Intimidation	Nonverbal cues indicating potential for resistance
Verbal Resistance	Verbal resistance to lawful orders or threatening remarks
Passive Resistance	Will not comply with verbal attempts but does not physically resist. Ex. "deadweight" or sit-ins
Defensive Resistance	No attack but prevents officer from gaining control. Ex. Pushing/pulling
Active Aggression	Physical assault w/ less than deadly force Ex. Punching and kicking
Deadly Force	Armed or unarmed attack that may result in serious injury or death. (use a firearm, edged instrument, club[3] etc.)

Levels of SMPD[4] Control	Ex. Of Types of Action
Empty Hand Control[5]	Attempt to restrain the individual using no weapons
Weapon Display[6]	Display of: Chemical Agent, Electrical Control Tool, Impact Weapon, and Firearm. Must note which weapon they displayed.
Intermediate Weapon Utilized	Use of: Chemical Agent, Electrical Control Tool, Impact Weapon, and Canine. Must note which one used.
Deadly Force	Use of Firearm

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[3] Club can be "any handheld object capable of blunt force trauma: stick, baseball bat, golf club, etc" (SMPD Policy #220.11)
[4] Note: Weapon Display and Intermediate Weapon Utilized are broad categories. The data set also broke down these categories into the type of weapon displayed and utilized (chemical agent, electrical, etc)
[5] Empty Hand Control refers to punches, kicks, holds, and takedowns (SMPD Policy #220.11)
[6] Weapon Display refers to displaying a weapon in order to draw attention to the weapon and gain compliance (SMPD Policy #220.11)

Statistical Techniques

Frequency

The first research purpose, demographic distribution of subjects, lends itself to descriptive analysis. The **frequency** of each gender and race category is run and determines how many cases are unique to each descriptive category. These frequencies are compared with the population distribution of San Marcos, based on the 2000 Census, to determine if any ethic group or gender is disproportionately present in the SMPD records. Disproportionate presence in the records however does not imply existence of discrimination by the SMPD.

Chi Square for Goodness of Fit

The working hypotheses of this research use a **Chi-Square test for Goodness of Fit** to determine potential relationships. Chi-Square is used "when an analyst attempts to fit a statistical model to observed data, [and] he or she wonder[s] how well the model actually reflects the data. How "close" are the observed values to those which would be expected under the fitted model?" (Yale website). Chi-Square in this research compares the overall demographics distribution of subjects in the SMPD data set, with each of the levels of resistance/aggression by the subject and the various levels of force by the officers. For example, this study is interested in finding out whether certain racial/ethnic groups are more prone to resistance or whether the level of force that is used by police officers relates to the subject's race and gender.

The findings of these tests are presented to the SMPD for review. Because this research involves confidential information on subjects, it is necessary to take ethical concerns into account.

Human Subject Protection

When performing research, it is important to keep in mind the ethical aspects of using human subjects to collect data. This research complies with the Institutional Review Board at Texas State (Reference #05-0359) as well as the principles discussed by the scholar Earl Babbie: no harm, anonymity, and no deception (Babbie 2004, 65). There is no foreseeable risk to either the subject or the responding officer in this analysis. The findings are presented in an aggregate form and no individual subject or officer is identified in this report. Instead, the data are sorted by incident number. Additionally, the SMPD provided the data for the sole purpose of this analysis and reporting the aggregate findings.

This research benefits the San Marcos Police Department and provides it with concrete information about the level of force used on specific genders and races. It also determines the most common levels of force in the police department. Through this information, the SMPD can determine if the classification of its current continuum should change. For more information about the San Marcos Police Department or the use of public records in research, please visit the SMPD Website, http://www.ci.sanmarcos.tx.us/Departments/Police/ or call 512.753.2108.

Chapter six presents the results of the statistical tests, discusses the relationships found, and notes any limitations in the research design.

Chapter Six
Results

Purpose

This chapter presents the findings from the statistical analysis. It begins with a description of the subjects the SMPD is encountering. The chapter also looks at the relationship between gender, race, and force. The findings follow the outline of the conceptual framework in Table 3.1. The explanation of the results also contains observations and limitations of the research.

Gender and Race

The first research question examines the demographics of the subjects the SMPD encounters. Table 6.1 compiles the frequencies of those demographics.

Table 6.1
Gender and Race Crosstabulation

Gender	Race				
	White	**Hispanic**	**African American**	**Asian**	**Total**
Male	284	129	54	1	**468** 86.2%
Female	46	23	6	0	**75** 13.8%
Total	**330** 60.8%	**152** 28%	**60** 11%	**1** .2%	**543**

The data indicates that White Males have the most interaction with the police. Over half the encounters (60.8%) are with the White race. During 2004 and 2005, Whites were encountered 330 times, Hispanics 152, African Americans 60 times and Asians only once. The following two pages show the percentages of gender and race in relation to the demographics of the city of San Marcos.

Chart 6.2
Gender Based upon 2000 Census[7]

49%

51%
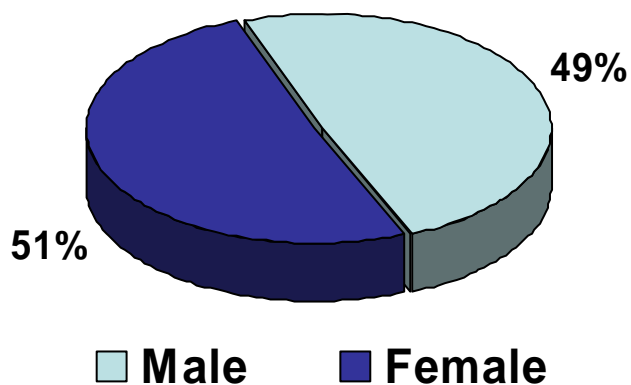
☐ **Male**   ■ **Female**

Chart 6.3
Gender based upon SMPD Data

14%

86%
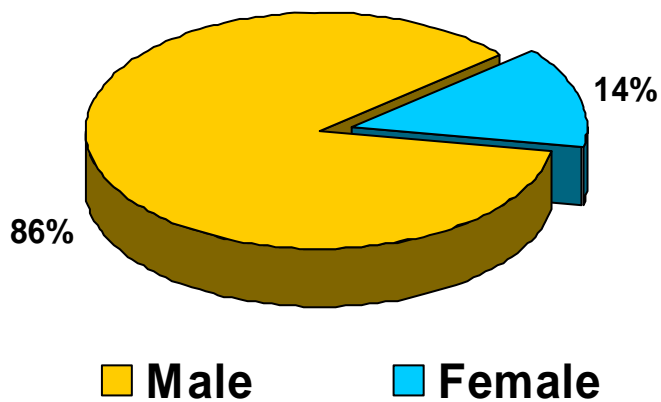
☐ **Male**   ☐ **Female**

Table 6.4
Gender Distribution Differences between the 2000 Census and the Data Set

Gender	Observed	Expected	Chi-Square
Female	75	276.9	300.494
Male	468	266.1	

*Results Significant at .01

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[7] Source: 2000 Census Bureau San Marcos Quick Facts.

Chart 6.5
Race Based upon 2000 Census[8]

37%

57%

5%

1%

☐ **White** ■ **Hispanic** ■ **African American** ■ **Asian**
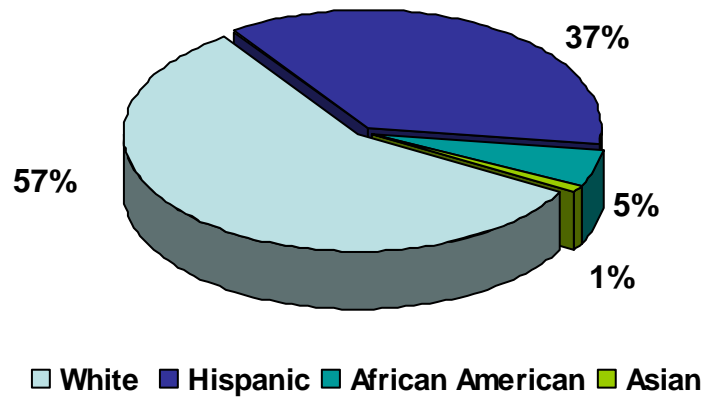
Chart 6.6
Race Based upon SMPD data

28%

61%

11%

0%

☐ **White** ☐ **Hispanic** ■ **African American** ☐ **Asian**
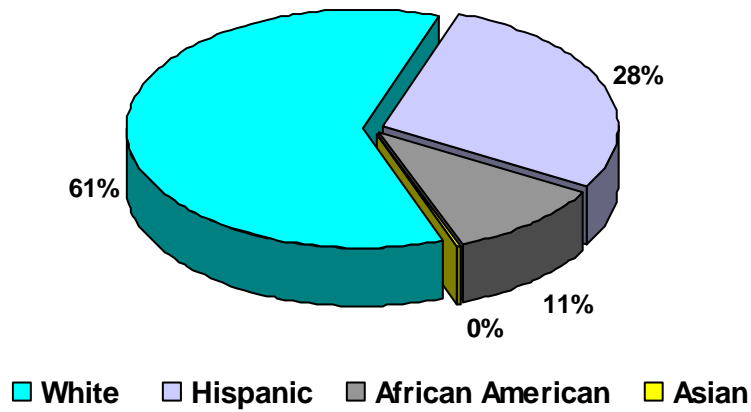
Table 6.7
Race Distribution Differences between the 2000 Census and the Data Set

Race	Observed	Expected	Chi-Square
Black	60	27.2	56.624
Hispanic	152	200.9	
White	330	309.5	
Asian	1	5.4	

*Results significant at .01

---

[8] Source: 2000 Census Bureau San Marcos Quick Facts

Chart 6.2 shows the San Marcos gender breakdown according to the 2000 Census Bureau. Compared to the findings of the San Marcos Police Department (Chart 6.3), it becomes apparent that Males come into contact with police on a more frequent basis. Based upon the review of the SMPD data, males experience force 86% of the time. Chart 6.4 shows the distribution of subject gender in the 2000 Census versus the SMPD data set. This table shows a significant difference between the number of males and females SMPD encounters. These findings are supported by the literature as well. Both Freeman and Garner, Maxwell, and Hereaux studies find that males commit more crimes than females. Because they commit more crimes, they are likely to experience a higher amount of force by officers. This research keeps in line with those studies because men experience force 86% of the time when encountering the SMPD.

In Chart 6.5 and 6.6, the focus shifts to race and compares the findings to the 2000 Census. According to the SMPD data set, white subjects encounter force 61% of the time. Table 6.7 uses Chi-Square to test whether the races encountered in the data set are proportional to the 2000 Census Bureau. The table shows that black and white subjects are disproportionately more likely to encounter police force, while Hispanic subjects experience less force than expected. This finding has mixed support by the previous scholarly literature. A study by Friedrich predicted equal amounts of force among the races. This was not the case with the SMPD data as whites and blacks were more likely to experience force than any other race.

Race and Officer Force

This section addresses the subject's race in relation to the degree of force used by the SMPD. Table 6.8 provides this breakdown. This tables shows whether the overall

distribution of various races among all subjects is significantly different than the

distribution of races who were subjects of police use of force.

Table 6.8
Race and Officer Force Levels

Officer Level of Force		Number of Subjects in Each Type of Police Force	Overall Distribution of Races among All Subjects	X^2
Empty Hand Control	Black	20	11%	
	Hispanic	35	28%	2.96
	White	72	60.8%	
Weapon Display	Black	41	11%	
	Hispanic	115	28%	
	White	261	60.8%	0.79
	Asian	1	0.02%	
Display Chemical Agent	Black	8	11%	
	Hispanic	9	28%	5.03
	White	18	60.8%	
Display Electrical Tool	Black	13	11%	
	Hispanic	62	28%	5.42
	White	103	60.8%	
Display Firearm	Black	26	11%	
	Hispanic	64	28%	
	White	163	60.8%	1.80
	Asian	1	0.02%	
Intermediate Weapon (IW)	Black	11	11%	
	Hispanic	15	28%	2.72
	White	36	60.8%	
IW - Electrical	Black	11	S	
	Hispanic	14	28%	4.00
	White	32	60.8%	

The "Weapon Display" category is an overall amount of the number of times that

officers display one of their weapons. The next three levels show the break down of this

category into the type of weapon displayed. According to the Chi-Square test, no

significant relationship between weapon display (and its components) and race was

found. This means that there is no relationship between race and the level of force

employed by an officer. Therefore, there is no racial profiling being done by the SMPD.
It should be noted that the categories "Displayed Impact Weapon", "Utilized Chemical
Agent", "Utilized Impact Weapon", and "Utilized Canine" all contained sample sizes that
were not large enough to draw a conclusion and were eliminated from this section[9].
Additionally, Deadly Force was never used by the SMPD in 2004 and 2005.

For all four races, the most common level of force that is used by officers is the
displaying of a firearm. For black subjects this occurs 26 times, hispanics 64 times,
whites 163 times and asians once. Followed closely behind that is displaying an
electrical control tool in which black subjects had 13 experiences, hispanics had 62, and
whites had 103 experiences. In every type of force, white individuals experience the
highest number of occurrences but that is proportional to their population. Because of the
lack of significance, the first working hypothesis is rejected. It would not be appropriate
to assume that a relationship exists between race and the amount of force a police officer
employs.

Race and Subject Resistance

Table 6.9 analyzes the subject's race and resistance levels. For those categories
not listed, the sample size was not large enough to draw any conclusions.

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[9] It should also be noted that there is one incident involving an Asian Male it is included in the appropriate
levels

Table 6.9
Race and Subject Resistance Levels

Officer Level of Force		Number of Subjects in Each Type of Police Force	Overall Distribution of Races among All Subjects	X^2
Psychological Intimidation	Black	18	11%	
	Hispanic	32	28%	4.73
	White	56	60.8%	
Verbal Resistance	Black	14	11%	
	Hispanic	32	28%	0.31
	White	66	60.8%	
Passive Resistance	Black	19	11%	
	Hispanic	38	28%	0.83
	White	85	60.8%	
Defensive Resistance	Black	29	11%	
	Hispanic	52	28%	
	White	109	60.8%	
Active Aggression	Black	8	11%	
	Hispanic	16	28%	0.81
	White	45	60.8%	
Deadly Force Assault (DFA)	Black	2	11%	
	Hispanic	23	28%	24.47**
	White	17	60.8%	
	Asian	1	0.02%	

* Signficant at .05
** Signficant at .01

This analysis indicates a significant relationship between race and deadly force assault. Specifically, hispanics conduct a Deadly Force Assault significantly more than blacks, whites or asians. The type of deadly force assault is not determined due to the small sample size. Overall, the second hypothesis is rejected because the majority of the results indicate that race is not a factor in subject resistance. A particular race, with the exception of Deadly Force Assault, does not prefer one resistance technique over another. The numbers are spread out evenly relative to their proportion among all subjects.

Gender and Officer Force

Table 6.10 discusses the relationship between subject's gender and the level of officer force. The results indicate a significant relationship between gender and officer force.

Table 6.10
Gender and Officer Force Levels

Officer Level of Force		Number of Subjects in Each Type of Police Force	Overall Distribution of Races among All Subjects	X^2
Empty Hand	Female	24	86.2%	2.77
	Male	103	13.8%	
Display Weapon	Female	52	86.2%	0.65
	Male	366	13.8%	
Display Chemical Agent	Female	2	86.2%	1.92
	Male	33	13.8%	
Display Electrical Tool	Female	10	86.2%	10.02*
	Male	168	13.8%	
Display Impact Weapon	Female	1	86.2%	0.16
	Male	4	13.8%	
Display Firearm	Female	42	86.2%	1.60
	Male	212	13.8%	
Intermediate Weapon	Female	5	86.2%	1.93
	Male	59	13.8%	

*Significant at .05

The category "Display Electrical Tool" indicates a significant relationship. Officers display an electrical tool significantly less on females. For both genders, displaying a firearm is the most common level of force. After that, females experience

empty hand control the most while men experience an electrical tool the most. Officers display an impact weapon the least amount of times for both genders.

Gender and Subject Resistance

The fourth working hypothesis findings indicate a relationship between the subject's gender and their level of resistance/aggression. The hypothesis details the type of resistance most common to each gender. These results determine which amount of resistance each gender is likely to display. This hypothesis shows two significant relationships. Table 6.11 provides the empirical findings.

Table 6.11
Gender and Subject Resistance Levels

Officer Level of Force		Number of Subjects in Each Type of Police Force	Overall Distribution of Races among All Subjects	X^2
Psychological Intimidtion	Female	3	86.2%	10.72**
	Male	103	13.8%	
Verbal Resistance	Female	6	86.2%	6.77**
	Male	106	13.8%	
Passive Resistance	Female	14	86.2%	1.85
	Male	128	13.8%	
Defensive Resistance	Female	22	86.2%	0.79
	Male	168	13.8%	
Active Aggression	Female	12	86.2%	0.75
	Male	57	13.8%	
Deadly Force Assault (DFA)	Female	7	86.2%	0.22
	Male	36	13.8%	

** Significant at .01

The analysis indicates no significance on four out of the six levels of resistance/aggression. The observed results are in line with the expected results. The categories of "Psychological Intimidation" and "Verbal Resistance" however are significant. The most common resistance type for both genders is Defensive Resistance. Women are less likely to display psychological or verbal resistance towards an officer.

For two cases, the hypothesis is upheld but for the other cases there is no significant relationship between gender and the level of resistance displayed. Therefore, for this hypothesis, we have found mixed results.

Subject Resistance vs. Officer Force

The final research purpose and working hypothesis discusses the level of officer force in relation to the subject's resistance level. Table 6.12 is a crosstabulation of the subject's resistance options and the level of force used by the officers. The rows of the table represent the levels of resistance that subjects display and are listed in order of increasing intensity. There is no breakdown of the Deadly Force Assault category because of the small sample size.

The columns represent the levels of control that an officer uses. The three columns in yellow represent a general category of force. The columns following the yellow highlights indicate the breakdown of the category. For instance, the "Display Weapon" column, highlighted in yellow, takes into account ALL the weapons that officers display. The next 4 columns represent the TYPE of weapon. For example, in Psychological Intimidation by a subject produces officers displaying a weapon 78 times of which 7 of those times are a Chemical Agent weapon. The type of weapons officers display generally adds up to more than the column because they can display multiple types of weapons during an encounter.

Each cell within the chart contains three numbers. The first number symbolizes number of entries within the cell. For example, "Defensive Resistance" and "Display Electrical Tool" have 63 in their cells. In this case, officers display their electrical tool 63 times when confronted with defensive resistance. The next number within the cell is the column percentage. This percentage refers to the number of times officers display that particular level of force. When officers use empty hand control, 12.7% of the time it is in response to psychological intimidation. The third number represents the row percentage which correlates with the subject's level of resistance. For example psychological intimidation by a subject leads empty hand control by the officer 12.9% of the time.

Table 6.12 presents the data analysis. It is important to note that each category is not independent of all others. Therefore, multiple levels of resistance and control could be used during one incident. The data findings reject the hypothesis because the level of force does not increase as the level of resistance increases. There is no level of resistance that displays a significantly higher amount of force than others as it increases. These findings have mixed support when compared the previous scholarly literature. Alpert and Smith predict that as the seriousness of the offense increases so does the amount of force used by officers. Table 6.12 does not show an increase in police force as the level of resistance increases.

Table 6.12
Subject Resistance Levels vs. Officer Force Levels

Subject Resistance Levels	Totals & Percents	Levels of Force Displayed by Officers									
		Empty Hand Control	Display Weapon	Display Chemical Agent	Display Electrical Device	Display Impact Weapon	Display Firearm	Intermediate Weapon Utilized	Utilized Chemical Agent	Utilized Electrical Device	Utilized Impact Weapon
Psychological Intimidation	N: Column %: Row%:	32 12.7% 12.9%	78 18.4% 31.5%	7 15.9% 2.8%	48 19.2% 19.4%	0	40 20.2% 16.1%	21 14.6% 8.5%	1 8.3% 0.4%	20 15.4% 8.1%	1 16.7% 0.4%
Verbal Resistance	N: Column %: Row%:	38 15.1% 15.0%	75 17.6% 29.6%	6 13.6% 2.4%	55 22.0% 21.7%	0	24 12.1% 9.5%	27 18.8% 10.7%	2 16.7% 0.8%	25 19.2% 9.9%	1 16.7% 0.4%
Passive Resistance	N: Column %: Row%:	51 20.3% 15.8%	94 22.1% 29.2%	15 34.1% 4.7%	54 21.6% 16.8%	2 28.6% 0.6%	45 22.7% 14.0%	30 20.8% 9.3%	3 25.0% 0.9%	26 20.0% 8.1%	2 33.3% 0.6%
Defensive Resistance	N: Column %: Row%:	88 35.1% 22.3%	107 25.2% 27.2%	9 20.5% 2.3%	63 25.2% 16.0%	4 57.1% 1.0%	43 21.7% 10.9%	40 27.8% 10.2%	3 25.0% 0.8%	36 27.7% 9.1%	1 16.7% 0.3%
Active Aggression	N: Column %: Row%:	39 15.5% 25.5%	32 7.5% 20.9%	3 6.8% 2.0%	20 8.0% 13.1%	0	14 7.1% 9.2%	22 15.3% 14.4%	2 16.7% 1.3%	20 15.4% 13.1%	1 16.7% 0.7%
Deadly Force Assault (DFA)	N: Column %: Row%:	3 1.2% 3.1%	39 9.2% 40.2%	4 9.1% 4.1%	10 4.0% 10.3%	1 14.3% 1.0%	32 16.2% 33.0%	4 2.8% 4.1%	1 8.3% 1.0%	3 2.3% 3.1%	0

When a subject displays a low level of resistance such as psychological intimidation or verbal resistance, the most common response by an officer is to display a weapon (mostly an electrical tool) in addition, perhaps, to other forms of force.

Passive resistance by a subject prompted officers to display an electrical control tool 54 times. It should be noted that they displayed an electrical control tool in addition to other forms of force. The next highest level of force demonstrated was empty hand control.   When a subject defensively resisted, empty hand control was used most often although not exclusively.

In terms of weapon use, officers display and use impact weapons less than any other level of force. It did not matter the level of subject resistance. Another level of force that received little utilization was the chemical agent.

Summary Table 6.13 provides each level of officer force and indicates the most common level of subject resistance. Surprisingly, defensive and passive resistance generate almost every level of force.

Table 6.13
Officer Force Levels vs. Common Subject Resistance Types

Type of Force	Most Common Resistance Types
Empty Hand Control	Defensive Resistance
Display Chemical Agent	Passive Resistance
Display Impact Weapon	Defensive Resistance
Display Firearm	Passive Resistance
Utilized Chemical Agent	Passive Resistance Defensive Resistance
Utilized Electrical Device	Defensive Resistance
Utilized Impact Weapon	Passive Resistance

Table 6.14 summarizes the level of subject resistance and the most common type of force

police use.

Table 6.14
Subject Resistance Levels vs. Common Officer Force Types

Type of Resistance	Most Common Force Type
Psychological Intimidation	Display Electrical Device
Verbal Resistance	Display Electrical Device
Passive Resistance	Display Electrical Device
Defensive Resistance	Empty Hand Control
Active Aggression	Empty Hand Control
Deadly Force Assault	Display Firearm

Chapter Seven
Conclusion

Purpose

It is commendable that the SMPD asked that this analysis be done in order to gain a better understanding of their department. Hopefully, the findings of this research will lead the SMPD to review current policies and procedures. This chapter is designed to provide recommendations to the San Marcos Police Department and draw attention to potential future research areas. A summary of the research findings can be found in Table 7.1.

Recommendations and Limitations

This section provides recommendations for the SMPD. The use of force reports need to be filled out correctly and in their entirety. This eliminates having to go through the data and correct errors. The most common mistake seen in this research was an officer forgetting to check appropriate boxes which has the potential to skew the data. To alleviate this problem, it might be necessary in a few places to reconfigure the reporting method to include only one column that officers have to check rather than two. For example, an officer must check that they displayed their weapon and then check in another area the type of weapon displayed. This could be simplified by setting up an "If, then" formula in Excel when the data is being entered. By doing this, when the officer checks that they displayed their Firearm, the other box would be automatically checked.

Additionally, the officer's race and gender needs to be included in the data set. By analyzing this characteristic, the SMPD can determine if officers of a particular race tend to use force at a higher rate on a specific race. Another aspect to consider is the time of the incident and whether this affects the level of force employed.

Table 7.1
Summary of Research Findings

Research Purpose 1: Describe the types of offenders the SMPD encounters

Descriptive Categories	Findings
Offender Characteristics	
Gender	SMPD encounters a disproportionately larger number of black and white subjects than expected. We would have expected 27 blacks and 309 whites but the actual numbers were 60 and 330 respectively. Additionally, Hispanics were encountered less than the expected 200 times.
Race	chi-square (3, n=543) = 56.62 Males were disproportionately more likely to encounter the SMPD than females. We would have expected 266 male encounters but the actual number was 468. chi-square (1, n=543) = 300.49

Research Purpose 2: Explore the relationship between the use of force and race and gender in terms of level of resistance/aggression demonstrated and the level of control employed by the SMPD.

Working Hypothesis	Findings
WH1: There is a relationship between race of a subject and the level of force employed by the police officers.	Results indicate that there is no significant relationship between the subject's race and the level of force by SMPD.
WH2: There is a relationship between the race of the subject and their level of resistance/aggression.	Results indicate that there is a significant relationship between Hispanics and deadly force assault. Hispanics use deadly force assault significantly more other races. We would have expected to see about 12 Hispanics using deadly force but the actual number is 23. The difference, while not large, is statistically significant. chi-square (3, n=543) = 24.47
WH3: There is a relationship between the gender of the subjects and the level of force employed by the police officers.	Results indicate that there is a significant relationship between females and the officer use of an electrical control tool. Females experience an electrical control tool significantly less times than males. We would expect to see 24 cases but the actual number is 10. The difference, while not large, is statistically significant. chi-square (1, n=543) = 10.02
WH4: There is a relationship between the gender of the subjects and the level of resistance/aggression.	Results indicate that there is a significant relationship between females and psychological intimidation. We would expect to see females use this resistance in 14 cases but the actual number is 3. chi-square (1, n=543) = 10.723 Additionally, there is a significant relationship between females and verbal resistance. We would expect females to use this resistance in 15 cases but the actual number is 6. chi-square (1, n=543) = 6.771

Research Purpose 3: Explore the relationship between the 6 levels of resistance and the type of control employed.

Working Hypothesis	Findings
WH1: The level of control employed by police is determined by the level of resistance shown by the subject.	Results indicate there is no significant relationship between the level of control employed by the SMPD and the level of resistance by the subject.

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