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**Representation and Recruitment:
A Three-Part Analysis of the Police Hiring Process Within
New York State**

By: Michelle J. Comeau

A Thesis Submitted

in Partial Fulfillment

of the Requirements for the Degree of

Master of Science

in

Criminal Justice

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**Representation and Recruitment:
A Three-Part Analysis of the Police Hiring Process Within
New York State**

By

Michelle J. Comeau

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Abstract

This thesis consists of three separate analyses, each of which examines the representation of women, African Americans, and Latinos in the police organization in some form. The initial study compares department representation to that of the community in regards to race or ethnicity and gender. This is followed by the second study, which looks at the hiring process of one department within a mid-sized city (Rochester, NY) in detail, noting attrition by majority/minority status at each hurdle applicants' face. The study portion of this thesis concludes by utilizing data from the second study to create a model of attrition for the Rochester Police Department. From these three studies a series of recommendations for departments was developed that focused on the ways to increase representation and promote retention among applicants.

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Beginning with the advent of the professional era of policing in the 1950s, law enforcement officers, primarily white and male, had become segregated from the communities they served; the professional era was marked by an occupational culture where officers were in but not of the communities they served (Sklansky, 2006). The last several decades have given rise to legislation which both promotes and encourages the entrance of women and minorities into this white-male-dominated field. It was once believed that the introduction of women and minorities into policing - especially patrol - would have a negative impact. However, research indicates that as representation has increased a myriad of benefits have become evident.

Through working to develop and maintain a diverse and representative police force, departments provide a sense of credibility; that is to say, they have the outward appearance of being the community policing the community. This credibility extends not just to female or minority officers within the department, but to the entire force (Sklansky, 2006). Indeed, as far back as the 1967 President's Crime Commission on Law Enforcement and the Administration of Justice, representation has been cited as a crucial factor in increasing officer credibility within the community (Sklansky, 2006).

The benefits of a diverse and representative police workforce could be profound. Three noted effects tend to occur among more diverse departments. The daily interactions between female officers and their partners, over time, help to shape the attitudes and beliefs of the partners. Additionally, research indicates that women have been found to handle domestic violence calls more effectively than men, but male officers who are partnered with female officers handle domestic violence calls as well as women (Silvestri, 2007). Although women's entry into patrol was fraught with instances of

sexual discrimination and harassment, increased interaction between male and female officers has seemed to work toward reducing hostility between genders (Sklansky, 2006; Franklin, 2005; Garcia, 2003; Sims, Scarborough, & Ahmed, 2003). It does not take much of a leap in logic to see that these benefits go beyond just female representation, indeed alternate “female” for “minority” or “openly homosexual” and the benefits of a diverse workforce seem to be truly profound (Sklansky, 2006).

As women and minorities begin to have a bigger stake in the police force their organizational strength will grow and they will gain greater power in shaping the police institution. This increased organizational strength can help to shape the future of law enforcement in a manner where it may adequately address the needs of female and minority officers. Another benefit of the increased organizational strength of female and minorities within policing is their ability to provide viewpoints on topics that may differ from those held by the primary police benevolent associations (Sklansky, 2006).

At this point there is enough data to analyze police department representation from multiple perspectives. This provides the ability to examine current police department representation as well as representation among prospective officers. That said, there is little research that currently exists on minority representation levels between departments, and even less on such representation throughout the hiring process. Thus, the goal for this thesis was to develop a body of research that would indicate how a number of police departments within the same state are performing compared to one another, and to examine one of these departments in-depth in order to glean more detailed information on representation and the police hiring process which could then be applied to all departments.

These goals were accomplished through a series of three separate analyses, each of which built upon its predecessor. This thesis began with an examination of the police department representation of women, African Americans, and Latinos among the twenty largest cities in New York State. This was followed by a detailed analysis of the Rochester Police Department's hiring process and attrition by Majority/Minority status throughout the process in Study Two. The analysis portion of the thesis concludes with Study Three, in which the creation of a predictive model of attrition in the Rochester Police Department's hiring process was attempted. Finally, the paper concludes with a summary of the findings and avenues for future research as well as a list of recommendations regarding the hiring process.

STUDY ONE

Introduction

Policing is increasingly becoming a field where officers need to have intimate knowledge of the communities they patrol. Research has illustrated that departments who are not reflective of their respective communities are at a higher-risk of having poor relationships within the community; this lack of understanding and communication may lead to misconduct on the officer's part (White & Esocbar, 2008; Rowe, 2002). It appears that, to truly become successful in policing today, it is necessary for a strong relationship to be created between the police and community (Ho, 2005).

Theoretical Framework

Conflict theory provides a means of putting into perspective the reason why, up until recently, women and minorities have largely been absent from policing. Conflict

theory is reflected in the works of Georg Simmel and Karl Marx, both of whom argued that conflict was a critical component of the social process (Akers, 2000).

In the 1950s, conflict theory found its way into the field of criminology and quickly overshadowed the consensus and functionalist theories – the two dominant theories of the first half of the last century. These two aforementioned theories argued that, on the whole, members of society agree on what behaviors are or are not considered permissible or desirable through their folkways and mores. Through this, a body of laws developed that are designed to serve the benefit of the entire public.

Conversely, conflict theory emphasizes the differential levels of power held between two separate groups. This theory proposes that laws are developed not by consensus, but by the powerful to support and further their norms and culture; the values supported do not necessarily reflect, and may be in opposition to, the values held by those without power (Akers, 2000; Mauer, 1997). Although the most commonly cited differential power structure is Marx's proletariat and bourgeois, this theory can extend to any form of inequality be it in socioeconomic status, race, or gender.

Conflict theory is unique from many other criminological theories in that it can explain both criminal behavior and criminal law (Akers, 2000). One recent example of conflict theory's utility in explaining the formation of laws would be in examining the differing levels of sentencing for powder and crack cocaine. In 1986 the Anti-Drug Abuse Act was passed – a portion of the act provided sentencing guidelines for both crack and powder cocaine. There was a great disparity in the sentencing level between the two drugs; an individual would need to have five-hundred grams of powder cocaine

to receive the same sentence given to an individual with just five grams of crack cocaine (Gallagher, 2008).

Although it was argued that the disparity between sentencing in the two drugs was due to the fact that crack cocaine was believed to be more addictive, resulted in more violence, and was more harmful when ingested by pregnant women, many have argued that this provision was, in essence, a form of institutional racism. Indeed, the law did have a disproportionate impact on inner city minorities – in 2006, over 80% of those sentenced on charges related to crack cocaine were African American, compared to 27% of those who were sentenced for powder cocaine (Gallagher, 2008; Mauer, 1997).

Through conflict theory the argument could be made that the sentencing level for powder cocaine was more lenient than that of crack cocaine as the population using it was primarily white and upper class – a similar demographic to those putting the laws into place. As crack cocaine is not as frequently used by the middle and upper classes, law and policy makers would likely have come into lesser contact with it and perceived it to be more dangerous in comparison to powder-cocaine although there is no empirical evidence that supports this assumption. While this provides an indication of the formation of criminal law, conflict theory can be utilized in explaining many instances of differential power bases, as seen below.

Much of conflict theory can be applied to police recruitment in terms of explaining the hiring of female and minority applicants from a historical perspective. Because the police recruitment process was developed in England and the United States by white males it is not a stretch to argue to some extent that the recruitment process was implicitly, or in some cases explicitly, designed to give white males a benefit.

Literature Review

Women in Policing

In 1971, the Supreme Court abolished gender discrimination within hiring practices in the landmark case *Reed v. Reed* (Grennan, 2000; Reed v. Reed, 1971). The Court's stance on the matter was further driven home the following year, when the 1964 Civil Rights Act was amended to include the Equal Opportunity Act and Title VII, which prohibited the use of discrimination in employment on the basis of sex, creed, race, color or national origin in both the public and private sectors (Rabe-Hemp, 2009; Rabe-Hemp, 2008a; Rabe-Hemp, 2008b; Seklecki & Paynich, 2007; Grennan, 2000; Price & Gavin, 1981; Lehtinen, 1976).

While formal gender-based regulations and requirements had been abolished, rules persisted that would disproportionately affect the hiring of female officers. In 1975, legislation in New York State made use of a last hired, first fired policy. This policy also provided a Veteran's preference, which gave officers two and a half years seniority if they had served in the overwhelmingly male-dominated military. This policy had a far greater impact on the rising female population than the established male population within the police force (Grennan, 2000). Minimal height and weight requirements, introduced into departments several decades earlier, persisted until the late 1970s; in many departments during the decade, patrol officers had to be a minimum of five-foot-eight (Lonsway, 2003). This restriction understandably resulted in many women being removed from the hiring process, even though it failed as a measure of performance prediction.

With the passing of Title VII women entered into policing in unprecedented numbers, reaching 8.8% of all patrol officers by the mid-1980s (Rabe-Hemp, 2008a). This last decade has, however, been one of slow progress. Women represented 11% of all sworn officers in 2000, by 2009, that number had only risen to 11.7%, peaking at 11.9% in 2008 (Federal Bureau of Investigation, 2009; Federal Bureau of Investigation, 2008; Seklecki & Paynich, 2007; Grennan, 2006; Zhao, He, & Lovrich, 2006; Federal Bureau of Investigation, 2000). While the percentage of women within policing has increased exponentially from their integration into patrol in 1972, there remains great variation between departments and women remain largely sequestered within the lower ranks of the field (Sklansky, 2006).

African Americans in Policing

The relationship between the police and the African American community can be described as tenuous at best. Throughout the past century, the manner in which African Americans have been treated by the police has resulted in feelings of distrust and a tendency to be critical of police actions (Raganella & White, 2004; Rowe, 2002; Hochstedler & Conley, 1986). Following the Civil Rights Movement and the Vietnam War, concentrated efforts were made to promote and increase the representation of African American officers throughout the United States; their increased presence was believed to be essential in improving relations with predominantly minority communities and controlling urban crime (Lyman, 2010; Zhao & Lovrich, 2007).

Despite the negative treatment of African Americans by police throughout the last century and despite the problems that still remain within policing, there has been progress (Zhao & Lovrich, 2007; Ho, 2005; Raganella & White, 2004; Hochstedler & Conley,

1986). Several factors have been identified that, when present, tend to increase the number of minority officers on the police force. Primary identified factors include African American political power in the form of an African American mayor, police chief, and high-ranking officers, overall city size, and the percentage of minorities on the labor force (Ganious, Button, & Rienzo, 2007; Zhao & Lovrich, 2007; Warner, Steel, & Lovrich, 1990; Lewis, 1989; Hochstedler & Conley, 1986). But the most commonly cited determinant for African American representation on the police department is the overall presence of African Americans within the city. That is to say, cities that have a larger community of African Americans to draw upon will expectedly have a greater number of African Americans who apply to the police force (Zhao & Lovrich, 2007; Lewis, 1989).

Although there are a number of macro-level reasons why representation may vary throughout the country, some researchers have proposed more individual-level reasons as to why so few African Americans apply to the police department relative to their population within the city. A myriad of factors influence an individual's choice to apply for the police. Two arguments have been posited as to why so few African Americans apply; these are the 'denial' and 'choice' arguments (Hochstedler & Conley, 1986).

The denial argument lies in the belief that institutional racism is the primary reason for the lower recruitment of minorities in policing (Ho, 2005; Hochstedler & Conley, 1986). If this were the case, then the denial argument might be supported by identifying areas within the hiring process where minority candidates drop out at significantly greater levels than majority candidates in a manner which could not be attributed to socioeconomic status and other factors.

The choice argument, as its name implies, states that African Americans choose not to apply for policing. Yet, in the field, minority officers have faced isolation, negative reactions from their families, a hostile community, and blatant racism at the hands of fellow officers (Rowe, 2002; Cashmore, 2001). If African Americans choose not to pursue a career in policing because they perceive such pervasive discrimination within the field, is their choice not limited to begin with? (Hochstedler & Conley, 1986).

Latinos in Policing

Although the first Latino police officer was employed in 1896 in New York City there is, unfortunately, a dearth in information regarding Latinos or Hispanics in policing. Much of the early research considered all minority groups as one – at time aggregating all non-whites as one group and, at other times, including white Hispanics or Latinos in the white category. As such, many of the arguments promoting the usage of African Americans on the police force have been applied to Latinos as well (Cohen, 1973). That is to say, the presence of minority officers works as a benefit to the community as it is thought that minority officers will be better able to relate with minority citizens, they have different experiences which could benefit them within policing, and they provide the department with a more positive, diverse image (Walker, 1983).

Latino officers are considered highly valuable to a department on the general assumption that, beyond the benefits they would present in working with and in predominantly Hispanic and Latino communities, they are bilingual (Regoli & Hewitt, 2010). While not all Latinos or Hispanics are bilingual, this belief persists (Dempsey & Forst, 2007).

One concern when it comes to examining research on Hispanic representation is this: what exactly is meant by Hispanic? In this particular paper Latino is utilized as a catchall phrase; however, the phrase Hispanic is quite large and includes Mexicans, South and Central Americans, and Puerto Ricans (Dempsey & Forst, 2007). There are a wealth of different cultures all listed under Hispanic, and while Hispanic may be a unifying title across the United States, it does not capture the actual ethnic makeup of each police department. The Hispanic population in Texas may be primarily Mexican, while in Florida it could be Cuban, and in Boston Puerto Rican, yet this diversity is lost under the Hispanic or Latino label.

With that said, there is believed to be some similarity in the manner in which Latinos and African Americans view policing. Throughout history, in the United States and abroad, Latinos have been poorly treated by many police organizations (Dempsey & Forst, 2007). Unlike women and African American officers, there has not been the same recorded level of racism against Latino officers in the United States, yet many officers have mentioned that they have heard commonly held stereotypes while conducting their work (Dempsey & Forst, 2007).

Prior research has noted that the representation of African Americans within the community is directly related to their presence on the police force, and some have even proposed this finding to be applicable across all minority representation (Dempsey & Forst, 2007; Ganius, Button, & Rienzo, 2007; Zhao & Lovrich, 1998; Lewis, 1989). Yet, because Hispanic is such a broad-reaching term, it would be questionable whether the varied Hispanic population within our examined cities had any impact on their presence in the police force. Despite Latinos having the most recent entry into the police

organization, they have been highly successful in achieving representation (Dempsey & Forst, 2007).

Method

Procedure

Raw data from the American Community Survey was transcribed into an Excel spreadsheet. Included within the spreadsheet was information relating to the total male, female, Caucasian, African American, Latino, and “Other” populations from the examined cities – “Other” included individuals from races and ethnicities not included in the aforementioned categories.

Population percentages were created for the three following populations of interest: females, African Americans, and Latinos. This was done by dividing each respective population by the total population. Initially, the “Other” group was disaggregated into an additional five categories with corresponding percentages for each group; however, with the absence of such data in the Uniform Crime Reporting System, these categories were aggregated and remain unexamined.

The New York State Division of Criminal Justice Service’s Uniform Crime Reporting System provided information on departmental characteristics including the total population, gender, racial, and ethnic breakdown for the four hundred and eighty-eight police and sheriff departments within New York State. More specifically, the dataset provided the total numbers of Caucasian, African American, Hispanic, and “Other” officers as well as the total number of officers by gender for each department.

In order for this data to be utilized it was necessary to use the terms Hispanic and Latino interchangeably, so for the duration of this experiment the use of the word Latino,

employed by the American Community Survey, is ascribed to all individuals who would fall under such a classification, as well as Hispanic individuals.

The ratio of percentage of any examined subset of the population to the percentage of that subset in its respective department was found through dividing the percentage of the population by the department population. For example, females in Yonkers comprise of 52.07% of the total population and 13.25% of the Yonkers Police Department, dividing 52.07 by 13.25 results in the number 3.93. From this, it can be inferred that, for every 3.93 females present in the community there is one female present in that department; alternatively, one could also say that there are 3.93 times as many females in the community as there are within the department.

For each of the three examined populations the ratio of percentage for that population was compared to the percentage of that population in a particular location's respective department. This data was then sorted by closest to farthest from true representation (1:1) and then charted, where it can be viewed in Charts 1.1, 1.2, and 1.3. Additionally, the categories 'Bottom 3rd', 'Middle 3rd', and 'Upper 3rd' were identified through ranking the percentages of African Americans and Latinos within their respective communities from lowest to highest. This was done to identify whether having a larger pool of minorities to draw upon would have any impact on recruitment.

Materials & Data

The United State Census Bureau's 2005-2007 American Community Survey contains in-depth information on the demographic characteristics of every city within the United States. Data from this survey was utilized in order to determine the major demographic characteristics for the twenty largest cities, two large counties near New

York City, and the state of New York. Cities examined include: Buffalo, New York City, Yonkers, Mount Vernon, Hempstead Village, Syracuse, Rochester, Niagara Falls, Freeport Village, Utica, White Plains, Binghamton, Jamestown, New Rochelle, Long Beach, Albany, Rome, Schenectady, Troy, and North Tonawanda. The counties of Suffolk and Nassau were also examined. Identified were the total percentage of Females, African Americans, and Latinos in each population, provided below in table 1.1.

Table 1.1 Population Characteristics for Cities, Counties, and State of New York

	<u>Total Population</u>	<u>Female</u>	<u>African American</u>	<u>Latino</u>
Albany	90,382	52.22%	28.52%	6.09%
Binghamton	43,059	50.48%	9.56%	5.03%
Buffalo	263,030	52.83%	38.89%	8.34%
Freeport Village	41,272	51.64%	32.88%	35.88%
Hempstead Village	49,645	49.93%	54.08%	35.80%
Jamestown	31,299	51.97%	3.06%	4.50%
Long Beach	33,395	50.17%	9.67%	8.67%
Mount Vernon	65,759	54.95%	59.93%	12.80%
New Rochelle	72,585	52.00%	17.74%	23.59%
New York City	8,246,310	52.33%	23.71%	27.39%
Niagara Falls	48,388	54.46%	18.40%	2.55%
North Tonawanda	32,113	49.56%	0.53%	0.00%
Rochester	199,697	51.80%	39.92%	13.26%
Rome	34,389	46.53%	6.41%	5.82%
Schenectady	62,528	50.53%	18.04%	7.38%
Syracuse	139,896	52.80%	26.57%	5.97%
Troy	47,763	48.57%	10.82%	5.42%
Utica	60,177	52.69%	12.22%	7.71%
White Plains	52,802	52.73%	13.44%	28.65%
Yonkers	195,817	52.07%	17.72%	29.67%
Nassau County	1,313,526	51.50%	10.63%	12.08%
Suffolk County	1,457,115	50.72%	6.94%	12.95%
New York State	19,280,753	51.54%	14.78%	16.22%

The mean population of cities and counties was 571,849; this number is exponentially greater than the median (61,218) and was undoubtedly skewed by the presence of the two counties and New York City, all of which had populations of over one million.

Representation for women in the sample ranged from a low of 46.53% (Rome) to a high of 54.95% (Mount Vernon). The average is just slightly over 50% at 51.39%.

Expectedly, there is a great variability in the presence of African Americans and Latinos in the examined population. African American presence varies greatly, from 0.53% (North Tonawanda) to almost 60% (Mount Vernon). The degree of variation is slightly smaller for Latinos, from 0.00% (North Tonawanda) to 35.88% (Freeport Village).

In August 2009 data were obtained from the New York State Division of Criminal Justice Services Uniform Crime Reporting System. This data provided the demographic characteristics for every police department within New York State. The total percentages of females, African Americans, and Latinos in each of the examined departments are listed below in table 1.2.

Table 1.2 Population Characteristics for Examined New York Police Departments

	<u>Total Population</u>	<u>Female</u>	<u>African American</u>	<u>Latino</u>
Albany PD	332	6.93%	8.13%	1.51%
Binghamton PD	139	7.91%	2.16%	2.16%
Buffalo PD	800	23.75%	24.75%	7.50%
Freeport Village PD	86	9.30%	15.12%	5.81%
Hempstead Village PD	112	12.50%	48.21%	5.36%
Jamestown PD	62	8.06%	1.61%	0.00%
Long Beach PD	73	6.85%	2.74%	10.95%
Mount Vernon PD	203	13.79%	31.03%	10.34%
New Rochelle PD	185	7.57%	13.51%	10.81%
New York City PD	35,761	17.47%	16.39%	29.84%
Niagara Falls PD	146	10.27%	3.42%	0.00%
North Tonawanda PD	48	4.17%	0.00%	0.00%
Rochester PD	759	11.59%	11.20%	14.36%
Rome PD	86	5.81%	1.16%	0.00%
Schenectady PD	166	5.42%	4.22%	2.41%
Syracuse PD	494	12.75%	7.69%	0.00%
Troy PD	122	4.10%	2.46%	1.64%
Utica PD	171	9.36%	4.09%	4.09%
White Plains PD	218	9.17%	11.93%	16.97%
Yonkers PD	649	13.25%	4.93%	11.25%
Nassau County PD	2,721	10.40%	4.37%	6.80%
Suffolk County PD	2,620	11.56%	2.37%	7.52%

New York State PD	4,944	8.60%	7.73%	6.27%
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The mean department size of combined cities and counties was 2,089. The found mean is far greater than the median (178) and was undoubtedly skewed by the presence of the counties Nassau and Suffolk as well as New York City; through the removal of these two counties and city we have an adjusted mean of 243.84.

Female representation within police departments throughout the largest cities of New York State reached a low of 4.10% (Troy) and a high of 23.75% (Buffalo); the average level of representation was 10.02%. In comparing this average with female officer representation in the Federal Bureau of Investigation’s 2009 Uniform Crime Reports, the sample population has an average female presence which is less than that of the entirety of New York State (13.79%) and the whole of the United States (11.70%) (FBI UCR, 2009).

There is a greater level of variation in the presence of examined minority populations within this sample. The representation of African Americans in examined police departments varies from a low of 0.00% (North Tonawanda) – indicating no African Americans present on the department – to a high of 48.21% (Hempstead Village). The variability for Latinos presence is smaller, from 0.00% (found in several departments) to a high of 29.84% (New York City). Unfortunately, the Federal Bureau of Investigation’s 2009 Uniform Crime Reports does not contain any information on African American or Latino presence within police departments, so the average African American or Latino presence cannot be compared to the entirety of New York State or the whole of the United States at this point in time.

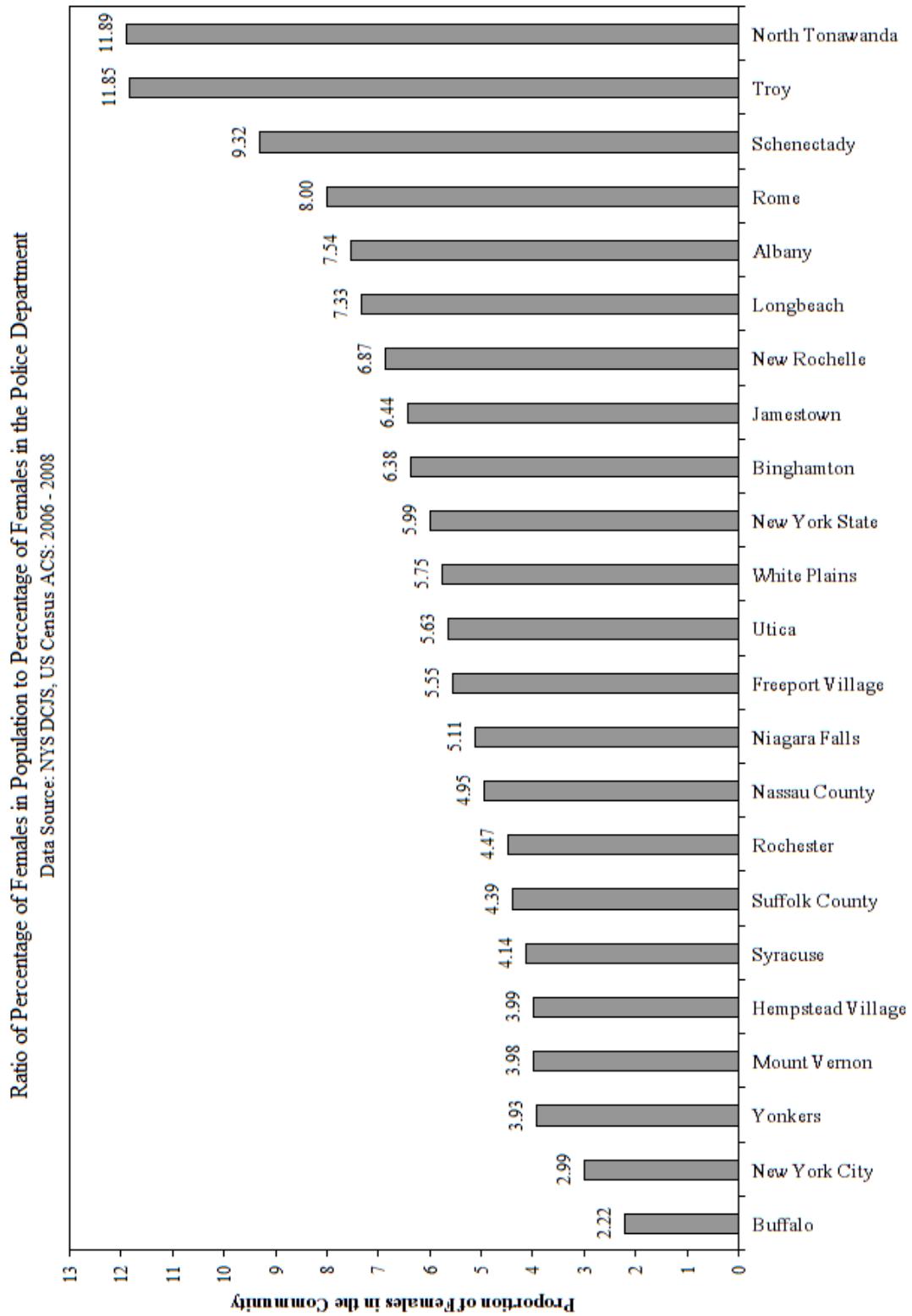
Findings

Female Representation

Chart 1.1 provides a visual representation of the ratio of the percentage of females in a population to the percentage of females in that population's respective department. A cautionary note when examining Charts 1.1 through 1.3 is that these charts only display the overall representation within the community; they do not indicate representativeness in terms of how many eligible, employable members are present within the community. This means that individuals are included who outside of the age range of officers and may otherwise be ineligible for the position – i.e., criminal record.

As indicated below, Buffalo and New York City appear to be the two departments with the best representation for women, each with less than three women present in the population for every woman present on their police force. Troy and North Tonawanda were found to be the least representative departments, both with over eleven women present in the community for every one woman on the police force. Although there is great variation in representation for women within the sample, the average ratio for representation was 6.03 with a standard deviation of 2.48. Utica served as the median department in terms of representation with a ratio of 5.63 times as many women within the community as female officers serving on the city's police department.

Chart 1.1 Ratio of Percentage of Females in Population to Percentage of Females in that Population's Respective Police Department



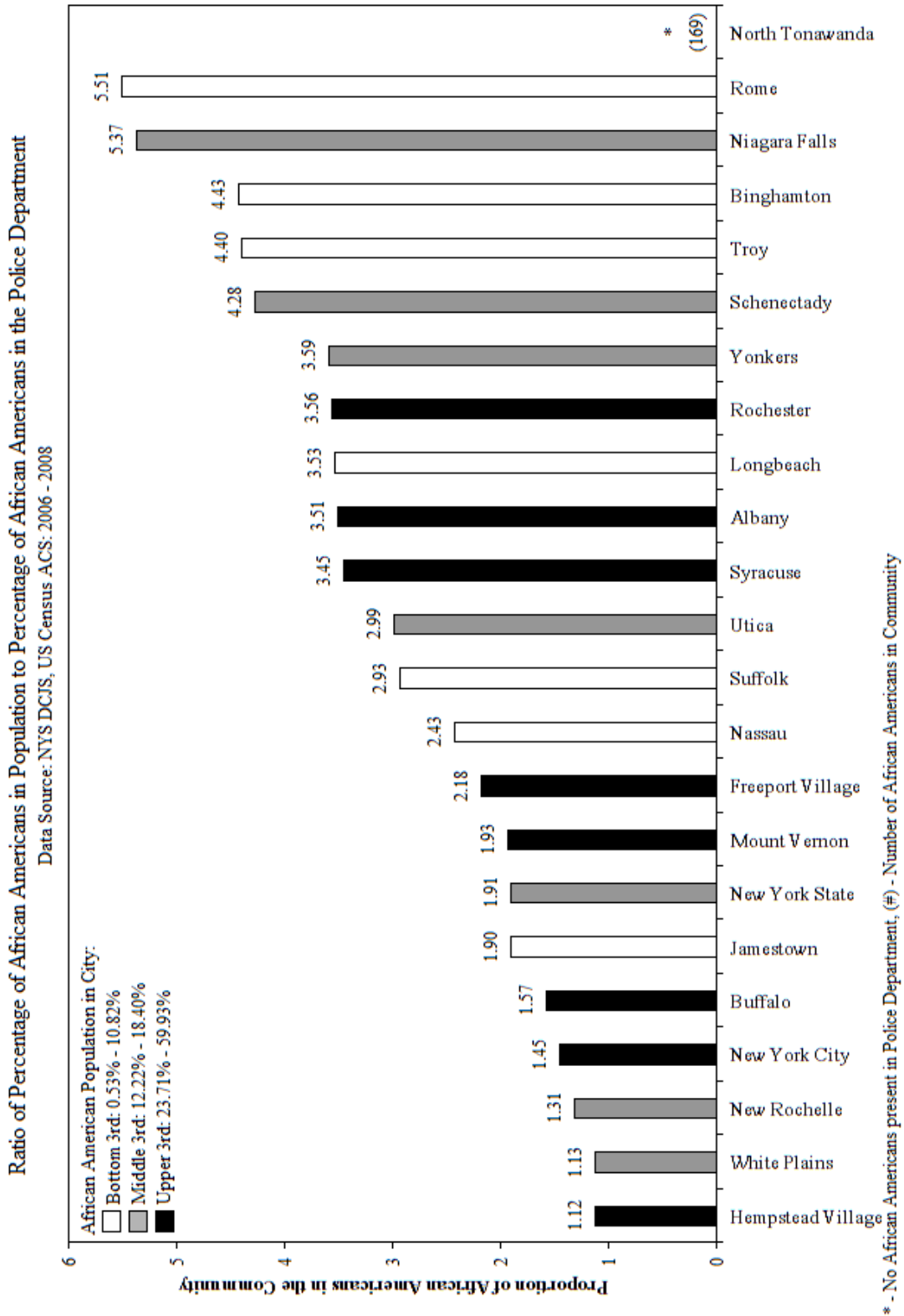
African American Representation

Chart 1.2 provides a visual representation of the ratio of the percentage of African Americans in a community to the percentage of African Americans in that community's respective department.

Hempstead Village, White Plains, New Rochelle, New York City, and Buffalo are the most representative of all departments sampled, each achieving a ratio of 1.6 or fewer individuals in the population for every one officer on the department. Of all departments sampled, only one (North Tonawanda) was found to have no African Americans serving on patrol within their department; however, this difference was not statistically significant in comparison to their population within the community.

Also provided in Chart 1.2 is the overall percentage of African Americans within the various communities. As can be seen on the graph, it appears that the top five most representative departments for African Americans draw upon a population within their community that is 12.22% or greater. The lowest percentage for the top five is White Plains with 13.44% of their community being African American; the highest is Hempstead Village with 54.08% of their community being African American. Conversely, of the five least representative departments, Niagara Falls has the greatest overall population of African Americans to draw upon within their community at 17.40%.

Chart 1.2 Ratio of Percentage of African Americans in Population to Percentage of African Americans in that Population's Respective Police Department



Individual averages, standard deviations, and medians were identified for cities based on the representation of African Americans within the community. For communities who were in the upper third in terms of representation of African Americans, the average representation was found to be 2.35 with a standard deviation of 1.01. The median ratio for representation of communities who have a large number of African Americans living within them was found to be 2.06.

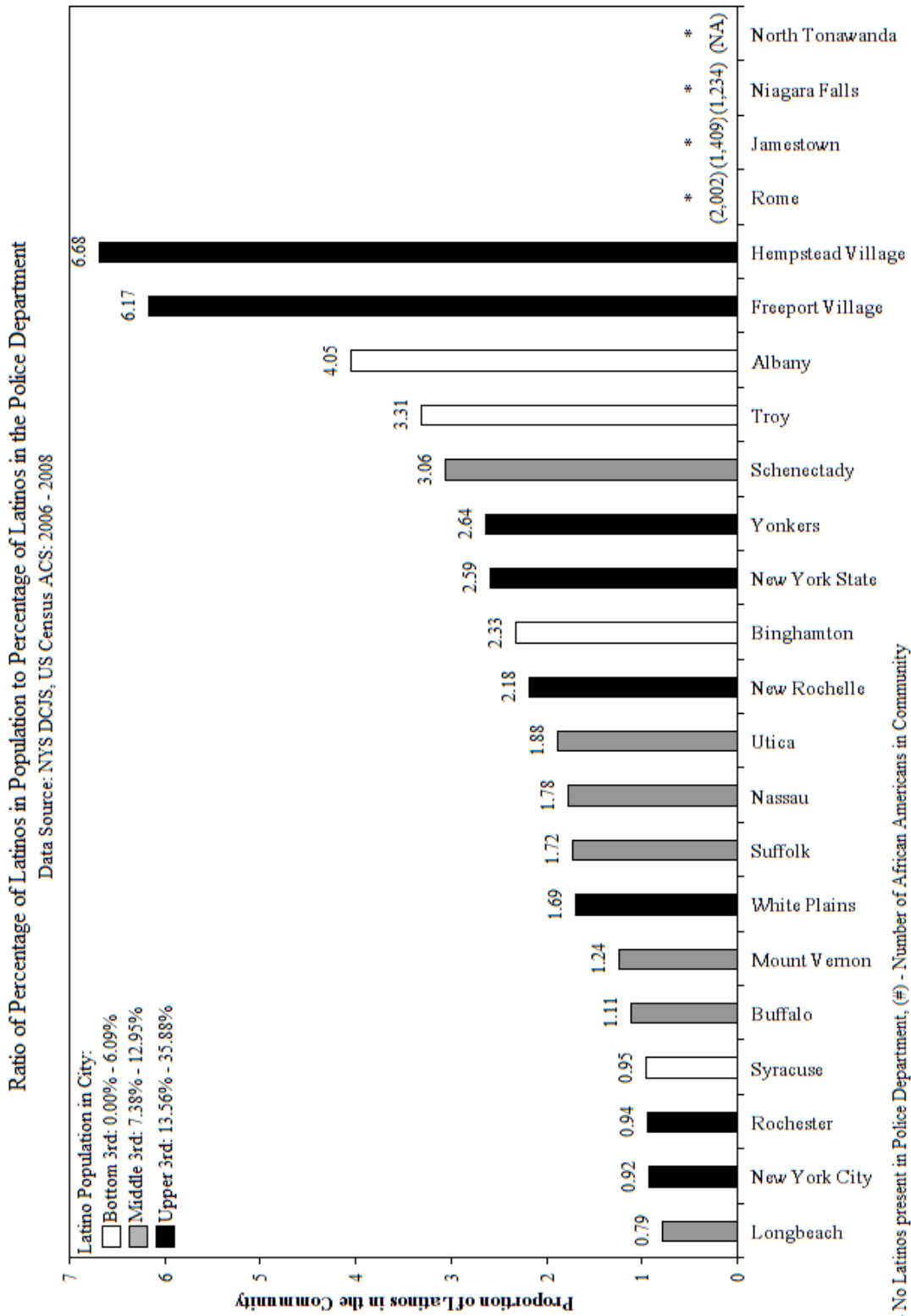
In examining communities who were in the middle third in terms of representation of African Americans it was found that they had a mean ratio of 2.94 with a standard deviation of 1.59. The median was slightly higher than the mean at 2.99. The cities who had the least number of African Americans living within their community performed the poorest, their mean ratio was 3.59 with a standard deviation of 1.27; their median was slightly better at 3.53. Thus, it appears that there is some validity to the statement that the overall presence of African Americans within the community may have some bearing on the ease of obtaining representation.

Latino Representation

Chart 1.3 is a visual representation of the percentage of Latinos in a population to the percentage of Latinos in that population's respective department. The cities of Long Beach, New York, Rochester, and Syracuse are all unique in that they have achieved a ratio of less than one individual in the population for every one on the department, that is to say they display an overrepresentation of Latinos on the police force.

Although several cities were able to achieve true representation, or even overrepresentation, a number of cities did not have any Latino officers on their police force, despite their presence within the general population.

Table 1.3 Ratio of Percentage of Latinos in Population to Percentage of Latinos in that Population's Respective Police Department



As with Chart 1.2, data from Chart 1.3 was utilized to identify the individual averages, standard deviations, and medians for cities based on the representation of Latinos within the community. For communities who were in the upper third in terms of representation of Latinos the average representation was found to be 2.97 with a standard deviation of 2.23. The median ratio for representation of communities who have a large number of Latinos living within them was found to be 2.39.

In examining communities who were in the middle third in terms of representation of Latinos it was found that they had a mean ratio of 1.65 with a standard deviation of 0.74. The median was slightly higher than the mean at 1.72. The cities who had the smallest percentage of Latinos living within their community had a mean ratio was 2.66 with a standard deviation of 1.34; their median was 2.82.

Unlike Chart 1.2, there appears to be no real correlation between population within the community and representation on the police force. Various population concentrations appear to be dispersed throughout the graph. If there is a relationship between representation and population within the community for Latinos it is much more subtle than it is for African Americans.

Discussion

Female Representation

The factors that drive male and female officers into policing are virtually identical, yet the recruitment of women remains a challenging process for most police departments (Ho, 2005; Raganella & White, 2004). This is clearly evident in the low levels of representation achieved by departments in the sample populations, with the most

representative department still having over twice as many women in the community for every one present on the department.

A number of reasons have been cited as to why increasing the representation of females in law enforcement has been so daunting a task. The origin for the current levels of underrepresentation of women in policing may be traced to the manner in which women have historically been treated in law enforcement. Women have played a role in law enforcement for the last one hundred and seventy years, a role where they were always subservient to men. Despite a veneer of equality, women largely remained seen by their sex rather than by their person (Rabe-Hemp, 2009).

Throughout the history of law enforcement, practices were utilized which were designed to deny female applicants the ability and opportunity to enter policing - the former usage of height requirements perhaps being the most egregious example (Flavin & Bennet, 2001; Sanders, Hughes, & Langworthy, 1995). Despite the widespread adoption of the Cooper Institute Fitness Standards – the Cooper Standards – which provide an equal assessment of strength for men and women, representation remains unattained (Jordan, Fridell, Faggiani, & Kubu, 2009).

Such discrepancies may be exacerbated because policing may never appear to be a viable option for women as women see so few other women on their town's own force; in order to increase the number of female applicants, recruiters must act in a proactive manner to show that policing is a viable career path for women (Foss, 2009; Jordan et al., 2009; Flavin & Bennet, 2001).

The history of women in policing is one of struggle; throughout their tenure in law enforcement, women have found themselves placed in roles that were based on

assumptions about their gender. Whether prison matrons or police officers, women have largely served as agents of morality tasked with the duty of saving wayward women and children, or tasked with those criminals, victims, and behaviors that the department felt needed a 'woman's touch', such as the handling of sex offense victims, traffic duties, and clerical work (Garcia, 2003; Grennan, 2000). Women still struggle to obtain equal treatment in the workplace, to be seen by their fellow officers not as policewomen but as police officers (Rabe-Hemp, 2008; Grennan, 2000).

While there still remains a high level of gender disparity in the recruitment process, great strides have been taken in the prior two decades to reduce the level of discrimination against women that was inherent in the process. This progress, while slow, is not going unnoticed. Many have argued that the changing demographics within departments in the last forty years have helped to tear down the largely homogenous police culture and create a new policing culture, with values more attuned to the community-oriented policing philosophy than those of traditional policing (Sklansky, 2006). If this is so then women have undoubtedly played a major role in reshaping police culture.

African American Representation

Although departments have made great strides towards representation, almost every department examined displayed a significant underrepresentation of African Americans within their department. However, there seems to be a noted correlation between the overall percentage of African Americans within a community and their presence within the police department. This data gives support to prior data which had

indicated that African American population within a city may have a compound effect on overall representation (Zhao & Lovrich, 2007; Lewis, 1989).

Latino Representation

In comparing Charts 1.2 and 1.3 it can be seen that the correlation between the overall percentage of African Americans within the community and their presence within the police department did not carry over for Latinos. While overall percentage within a community may have an effect on African American police representation, it does not appear to have as strong, or any effect, on the representation for Latinos within our sample population.

While representation between African Americans and Latinos was more comparable than for African Americans and Women or Latinos and Women, there is still a noted difference between the two. That is to say, although Latinos were able to achieve representation in several departments – whereas African Americans were not – there was also a greater variability in representation for Latinos than for African Americans. These results mirror those found by Walker in his study examining representation trends in the fifty largest cities in the United States (Walker, 1983). Such a fact seems to indicate that it would behoove departments when they obtain data on representation to be more descriptive than “Majority” or “Minority” as such overarching labels lose sight of the more minute differences between groups.

Conclusion

In comparing the presence of females, African Americans, and Latinos in departments to their presence within the department’s community this study confirmed prior research in that females and minorities remain underrepresented in the vast majority

of departments (White & Escobar, 2008; Raganella & White, 2004; Sanders et al., 1995). Despite this, policing has increasingly become a desirable profession with more women and minorities entering into the field in recent years (Raganella & White, 2004; Flavin & Bennet, 2001). Indeed, officers go into policing for similar reasons regardless of their race or gender (Raganella & White, 2004). Although setbacks have occurred throughout the years there has been notable progress in attempts to achieve representation (Ho, 2005; Sanders et al., 1995). Many departments are now of the opinion that the hiring and retention of quality staff goes hand in hand with representation (Decker & Huckabee, 1999; Warner et al., 1990).

STUDY TWO

Introduction

The last few decades have brought about a renaissance in the police hiring process. With the near universal use of civil service exams, physical agility exams, psychological testing, background investigations, and the burgeoning use of assessment centers and other elaborate means of assessment, candidates now undergo a process far more sophisticated than that of prior decades. What follows is an analysis of the police officer hiring process as it is implemented by the City Police Department in Rochester, New York. In this experiment attrition throughout the process is examined, as well as the disparate attrition between majority and minority candidates.

Literature Review

Over the last forty years the screening process for police officer applicants has evolved to replace the nepotism of yesteryear (Decker & Huckabee, 1999). In 1973 the National Advisory Committee on Criminal Justice Standards and Goals suggested that in

the process of hiring police officers departments utilize a screening system which included an oral interview, background check, physical exam, and tests of psychological, personality, and cognitive ability (Sanders et al., 1995). The most common screening processes of today include a civil service exam, physical agility tests, psychological examinations and interviews, medical examinations, situational tests, polygraph examinations, assessment centers, and comprehensive background investigations (Jordan et al., 2009; Decicco, 2000; Alpert, 1991).

For seventy years the primary mode of police officer candidate selection has been the screening-out model. Under this multiple-hurdle approach applicants must pass a number of tests, those who are not able to do so are no longer considered (Jordan et al., 2009; Metchik, 2000; Sanders et al., 1995). The logic behind this model is the belief that applicants who are able to pass every test must have the highest potential for success (Jordan et al., 2009; Poland, 1978). When applying a screening-out model the benefits are clear: only a small percentage of individuals can pass every test given (Decicco, 2000). The screening-out model serves to remove applicants who display problematic behavior – reducing the likelihood of hiring officers who would be unsuccessful in their duties (Decicco, 2000; Sanders et al., 1995; Hogue, Black, & Sigler, 1994).

Before an individual is eligible to apply for the civil service exam he or she must first meet a number of prerequisites. In Rochester, the prerequisites to be considered for the civil service exam are as follows: an education which has resulted in a minimum of a High School Diploma or General Education Degree, United States citizenship, being between the ages of 19½ and 35 years, a valid driver's license, no felony convictions, good physical condition, and strong moral character (City of Rochester Website, 2010).

The civil service exam is a measurement tool that identifies an applicant's ability to comprehend and interpret the myriad of scenarios he or she may face as an officer (Metchik, 2000). In the Rochester Police Department this test is held on a Saturday approximately forty days after applications are closed. Only those candidates who pass the civil service exam are invited to the physical agility exam.

The Rochester Police Department has operated under a court-ordered consent decree since the early 1970s. This decree stipulates that for every four candidates hired one minority candidate must be hired. The processing of majority candidates above a certain score helps the Rochester Police Department to decrease the costs of the pre-employment process while evening out the number of majority and minority candidates. This step is essentially passive in that applicants will only become aware of whether or not they continue on by their subsequent invitation to the physical agility exam. At this point in time all minority applicants who achieve a passing score (70 or above) are invited to the physical agility exam. Depending on hiring needs, majority candidates with a passing score between 75% and 90% are invited to the physical agility exam. The recent need for more officers in Rochester resulted in the lowering of the processing score for majority candidates.

As with most departments, the Rochester Police Department utilizes a physical agility exam in their screening process. While there are a number of exercises used by departments including pull-ups, pushups, sit-ups, a 1.5 to 2 mile run, obstacle courses, tests of hand strength, bench presses, and the sit-and-reach, many have a disparate impact on female applicants (Lonsway 2006; Lonsway, 2003; Decicco, 2000; Ash, Slora, & Britton, 1990). To counter this, the Rochester Police Department makes use of the

“Cooper Standards” in their physical agility exam, providing an equal assessment of strength for men and women (Jordan et al., 2009). The Rochester Police Department’s physical agility exam is comprised of pushups, sit-ups, and a 1.5 mile run. This exam typically takes place one month after candidates receive their invitation.

The Rochester Police Department begins their background process as soon as applicants pass the physical agility exam. This process continues until an individual is, or is not, hired. Once an applicant successfully completes the physical agility exam he is required to provide the police with biographical information on himself. The background process serves to determine whether an applicant has a suitable history to be a police officer; such invasive measures are utilized to ensure that only qualified individuals are hired as officers (Decicco, 2000; Poland, 1978). By questioning an applicant about his or her educational level, residency, employment record, drug use, alcohol use, credit history, and then verifying each piece of information, departments are able to determine the overall honesty with which applicants report information about themselves (Decicco, 2000).

Upon successful completion of the physical agility exam and after the candidate receives a conditional offer of employment from the department the candidate is scheduled for the medical and psychological exams. The medical exam utilized by the Rochester Police Department consists of a hearing test, a myriad of sight tests, reflex tests, an electrocardiogram, and a drug test.

The Rochester Police Department performs a battery of psychological tests in the first few weeks after candidates have completed their physical agility exams. Three psychological tests are administered: the revised Minnesota Multiphasic Personality

Inventory (MMPI-2), the California Personality Inventory (CPI), and the Inwald Personality Inventory (IPI). These tests serve primarily to identify a candidate's negative personality traits and their propensity for corruption (Ho, 2005). The Wonderlic Personnel Test – a brief intelligence test – as well as an in-house created biological data form are also administered at this point in time.

While the use of psychological testing has been justified in court over the years, there are three problems inherent in how such measures are utilized. Research has indicated that false positives occur fairly often in the use of psychological testing – individuals are rejected who would have otherwise been acceptable if hired (Metchik, 2000; Hiatt & Hargrave, 1988; Hargrave & Hiatt, 1987). As they are now, psychological tests do not distinguish between those who would be average officers and those who would be exceptional officers (Metchik, 2000). Even if departments know what they want in an officer, the tests primarily focus on identifying what they do not want (Hogue et al., 1994). Finally, psychological measures are frequently validated through police academy performance – this validation does not necessarily reflect an officer's performance in the field (White & Escobar, 2008; Metchik, 2000).

The Rochester Police Department has tried to address a number of the aforementioned issues by having all applicants who participate in the psychological tests participate in a psychological interview that occurs in the weeks following the tests. The psychological interview allows the applicant to explain any confusion which may have arisen while he was taking the test - this also provides the psychologist an overview of the applicant's overall mental health and suitability for the position. While psychologist

recommendations are not legally binding, many departments trust their decision (Ho, 2005).

Although the usage of the polygraph is prohibited in the private sector it is still allowed in the police hiring process (Decicco, 2000). For the Rochester Police Department the polygraph is used in conjunction with the personal interviews beginning approximately one month after the psychological interviews have been completed. It is employed largely as a means to determine whether applicants are as honest as they have purported themselves to be (Hogue et al., 1994). At the point the polygraph is employed the background process has been active for several months – officers know most of the information they need about the applicant, they just want to ensure that the applicant is truthful. Ironically, as one Rochester lieutenant stated, some individuals have been unsuccessful in the polygraph due to untruthful statements which, if they had been truthful, would not have necessarily been reason for disqualification.

Method

Materials

Data was obtained from Rochester City Hall's Bureau of Human Resource Management about the hiring process for the December 2000 civil service exam class through the hiring process for the May 2008 exam class – a total of ten hiring classes. At the time the data were collected there were two more recent recruitment groups listed; however, these were not included as one was still in the recruitment process and no individuals were hired from the other.

Candidates were identified by their race; anyone who listed himself as White/Non-Hispanic was considered majority. Minority candidates include African American, Asian, Hispanic/Latino, and Native American persons.

Procedure

Raw data on the 2000 through May 2008 were transcribed into an Excel spreadsheet. Included within the spreadsheet were information relating to civil service test date, exam number, the date in which the list was established, the total number of individuals who applied for, appeared at, and passed the civil service exam, the number of individuals who were invited to the physical agility exam (processed), the number of individuals who did not withdraw from the process, the number of individuals who appeared for the physical agility exam, the number of individuals who passed the physical agility exam, the number of individuals who passed the medical exam, the number of individuals who passed the background exam, and the number of individuals who were eventually hired. These data were further subdivided into the total in each group by minority/majority status.

Aggregates were created of each of the aforementioned ten steps for total, minority, and majority population. Chart 2.1 illustrates six unique variables within the Rochester Police Department's hiring process. Each step is listed, from the total number of initial applicants to those who were hired. Representation at each step in the hiring process was determined by dividing the aggregate minority or majority group by the total, then multiplying by one hundred for each point of attrition. To identify the total proportion of individuals who remained at each point of attrition the total aggregate number of individuals in each step was divided it by the total aggregate number of

individuals in the prior step. For example, a total of 11,311 individuals appeared for the civil service exam versus the 15,553 who applied. Dividing the former by the latter provides you with a result of 0.73; therefore, the pie chart of the total number of individuals who appeared for the civil service exam is 0.73 times the size of the pie chart of all individuals who applied for the civil service exam.

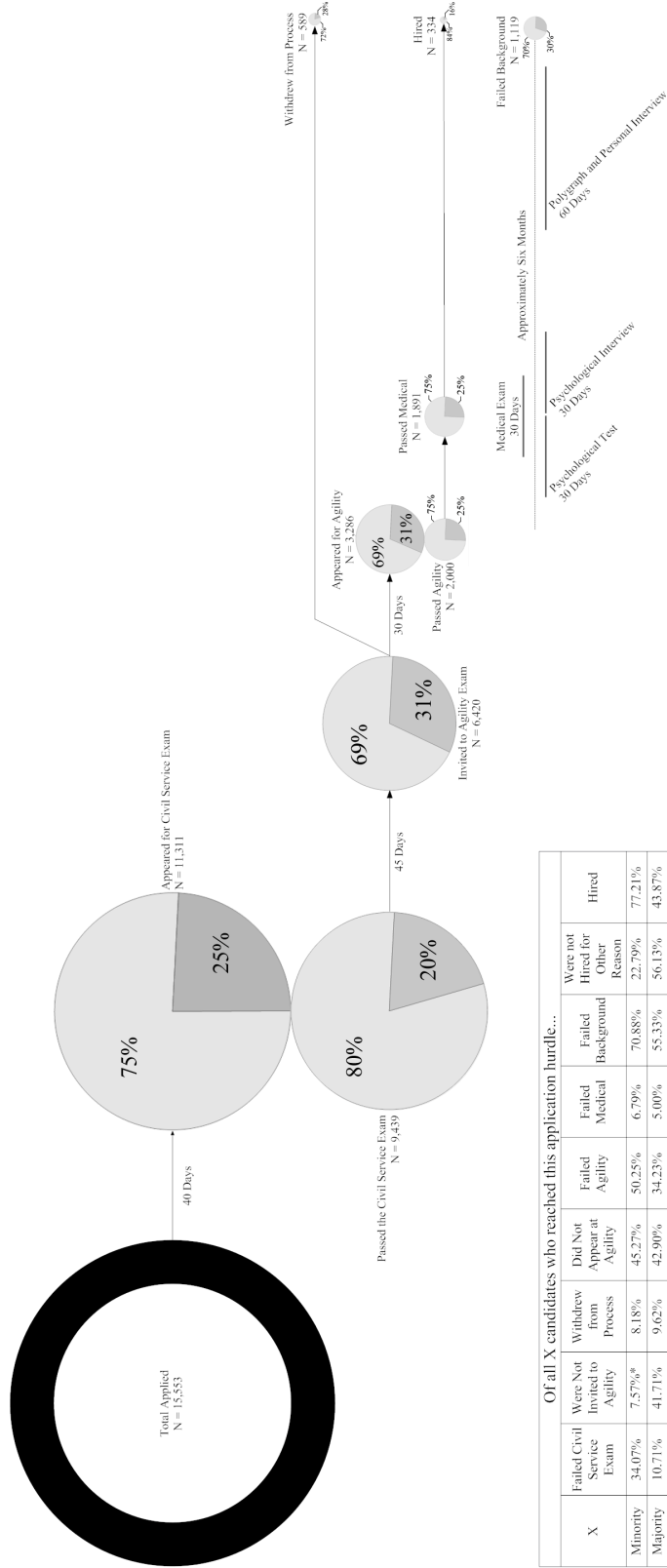
Within the original draft of Chart 2.1 each day was created to be one-tenth of a centimeter. Although the actual distance between each point of attrition varies based on the medium through which Chart 2.1 is viewed and the size, the distance between points of attrition still remains proportional. The table in the lower-left hand corner of Chart 2.1 was created by dividing the total number of X individuals (minority/majority) who failed at a certain step by the total number of Y individuals (minority/majority) who had successfully accomplished all previous points of attrition. This number was then converted into a percentage by multiplying by one hundred.

There are five steps which make up the background process: the psychological exam, medical exam, psychological interview, the polygraph/personal interview, and the background investigation which consists of, among other things, credit and reference checks as well as educational and military history. Data on attrition rates were available for the medical, but not for the remaining steps which make up the background process. While it was not possible to display attrition for each of the four steps, the steps are illustrated in Chart 2.1 as to where they occurred during the background process and the approximate length of time or duration.

Chart 2.1 Attrition within the Rochester, New York Police Hiring Process, December 2000-May 2008 Classes

Rochester Police Department:
Attrition by Race in the Hiring Process
2000-2008

Legend:
 Minority Applicants
 Majority Applicants



Of all X candidates who reached this application hurdle...

X	Failed Civil Service Exam	Were Not Invited to Agility	Did Not Appear at Agility	Failed Agility	Failed Medical	Failed Background	Were not Hired for Other Reason	Hired
Minority	34.07%	7.57%*	45.27%	50.25%	6.79%	70.88%	22.79%	77.21%
Majority	10.71%	41.71%	42.90%	34.23%	5.00%	55.33%	56.13%	43.87%

Note: * indicates area where application hurdle resulted in an increase in applicants.

Data Source: Bureau of Human Resource Management, Rochester City Hall

Findings

Three distinct means by which candidates may be removed from the hiring process were identified. Firstly, candidates could be removed by the police department; this would include individuals who were processed out or who were not hired despite passing all every application hurdle. Secondly, individuals could be removed via voluntary removal; this would be individuals who chose not to appear for the civil service or physical agility exams or who voluntarily withdrew from the process. The third manner in which an individual may drop out of the hiring process is by failure; this would be attrition via the unsuccessful completion of the civil service, physical, or medical exams, or the background process.

The initial sample of 15,553 consists of all individuals who applied for the December 2000 through May 2008 Rochester Police Department civil service exams, met the prerequisites required by the department, and were invited to participate in the civil service exam. Unfortunately, data on the racial makeup of all those who applied were unavailable; the first step at which this data was provided was in candidate's appearance for the civil service exam. Appearance at the civil service exam marks the first point of attrition within the study. 4,242 individuals – 27% of all applicants – who applied for the civil service exam did not appear for the subsequent test. This drop off in attrition illustrated in Appendix A, wherein candidates voluntarily removed themselves from the process by their failure to attend, is the largest singular point of attrition within the entire sample.

Appendix B provides the level of attrition between those who appeared for the civil service exam, and those who passed the exam. 9,439 of the 11,311 applicants who

appeared for the exam passed: approximately 83%. Of all majority candidates who appeared for the civil service exam 10.71% failed. While that number may seem high it pales in comparison to the total number of minority candidates who failed: 34.08%. Overall, 12% of the entire sample failed the civil service exam.

In order to comply with Rochester Police Department's consent decree, of the 6,420 individuals who were "Invited to [the] Agility Exam," 69% were majority candidates and 31% were minority candidates. As seen in Appendix C, of all majority candidates who passed the civil service exam 41.71% were not invited to the physical agility exam. All minority candidates who passed the civil service exam were processed and invited to the physical agility exam. All told, a little over 19% of the entire sample was removed via processing.

Of the 6,420 individuals who were invited to the physical agility exam 3,286 appeared: 51%. Appendix D illustrates this voluntary drop off in candidates. Sixty-nine percent of all applicants who appeared for the physical agility exam were majority candidates while the remaining 31% were minority candidates. Of all majority candidates who were processed and invited to the physical agility exam 42.9% did not appear; of all minority candidates who were processed and invited 45.27% did not appear. All told, just over 20% of the entire sample failed to appear for the physical agility exam.

Sixty-one percent of all individuals who appeared for the agility exam passed. Appendix E shows the majority and minority breakdown at this point at 75 and 25%, respectively. 50.25% of all minority candidates who appeared for the agility exam failed it, while 34.23% of all majority candidates who appeared for the exam subsequently failed it. All told, slightly over 8% of the entire sample failed the physical agility exam.

Although the medical exam can occur several weeks after the psychological tests have begun, the fact that its data is listed as separate from the background investigation necessitates the explanation of it prior to the attrition that occurs during the remaining portions of the background process. As seen in Appendix F, ninety-five percent of all individuals who passed the physical agility exam passed the medical exam. Of all individuals who passed the medical exam, 75% were majority and 25% were minority candidates. Of all minority candidates who passed the physical agility exam 6.79% failed the medical; this is similar to the 5.00% of all majority candidates who passed the physical agility exam and subsequently failed the medical. All told, less than 1% of the entire sample failed the medical exam.

The background process is listed separately within Chart 2.1 as it would otherwise be impossible to properly illustrate attrition within this particular point. As seen in Appendix G, a total of 1,119 individuals were unsuccessful in the background process from the December 2000 through May 2008 classes. Of those who failed the background process 70% were majority candidates and the remaining 30% were minority candidates. Of all majority candidates who reached the point of the background process 55.33% subsequently failed; of minority candidates 70.88% of all those who reached the point of the background process subsequently failed at that attrition point. Just over 7% of the entire sample failed the background exam.

The Rochester Police Department hired a total of 334 individuals from the December 2000 through May 2008 classes - a number considerably smaller than the initial 15,553. Approximately 2.15% of all applicants in the initial sample were subsequently hired. As seen in Appendix H, of those applicants hired, 84% were majority

and the remaining 16% were minority. Of all majority candidates who had passed all prior application hurdles 56.13% were not hired for an unlisted reason while 22.79% of the remaining minority candidates were not hired for an unlisted reason. These unlisted reasons include, but are not limited to: military and educational deferment. Unfortunately, it is impossible to accurately determine how many people passed all application hurdles and then were not hired as, during this time, applicants were also withdrawing and failing the background process.

Discussion

This study was conducted to ascertain at which steps in the hiring process Rochester Police Department applicants are most likely to drop out. The two main goals in conducting this study were to determine the attrition of individuals by majority/minority status at each recruitment hurdle and to identify the points at which applicants were inclined to be most unsuccessful.

Chart 2.1 provides a table which illustrates the differential levels of attrition between majority and minority candidates at each particular point in the hiring process, for a quick reference it is provided below in Table 2.1. This table can be used to make comparisons between majority and minority attrition.

Table 2.1 Differential Attrition Rates for Majority and Minority Candidates

Of all X candidates who reached this application hurdle...			
Type of Removal	Point of Attrition	Minority	Majority
Failure	Failed civil service exam	34%	11%
Departmental Removal	Not invited to physical agility exam	8%*	42%
Voluntary Removal	Withdrew from process	8%	10%
Voluntary Removal	Did not appear for physical agility exam	45%	43%
Failure	Failed physical agility exam	50%	34%

Failure	Failed medical exam	7%	5%
Failure	Failed Background Exam	71%	55%
Success	Hired	77%	44%
Note: * indicates area wherein application hurdle resulted in an increase in the number of applicants			

For the table above it was determined that the specific type of attrition should also be included. As seen, majority and minority attrition is fairly similar in a number of instances, such as in rates of withdrawing from the process, not appearing for the physical agility exam, and failure of the medical exam. Other steps where there is noted differentiation, such as not being invited to the physical agility exam or being hired may be explained as byproducts of departmental policies. There are, however, three instances where there is great disparity between majority and minority candidates which cannot otherwise be explained.

All told, only 29% of applicants failed out of the process. Yet, in three out of the four instances where an individual may fail out there was great disparity between majority and minority groups. There are noted differential rates of failure between majority and minority candidates for the civil service exam (34.07% for minority vs. 10.71% for majority), the physical agility exam (50.25% for minority vs. 34.23% for majority), and the background process (70.88% for minority vs. 55.33% for majority). Unfortunately, there is a dearth in data to sufficiently assess attrition by race, so it would be unwise to make any inferences on the differential failure rates between majority and minority candidates at this point in time aside from acknowledging that this disparity exists.

The hiring process for Rochester Police Department lasts nine months; the first three of these months involve the administration and processing of a civil service exam, which means that the total time that the Rochester Police Department is, in fact, in control of the process is approximately six months. However, the total length for the police hiring process appears to promote applicant dropout (Decker & Huckabee, 1999).

At 589 candidates, the number of individuals who have officially withdrawn from the process is quite small. Only 9.17% of all applicants who were invited to the physical agility exam subsequently withdrew, but by compiling the total number of individuals who officially withdrew with those who did not appear for the civil service exam and those who were eligible for the Physical Agility Exam but did not appear one may obtain an exponentially greater number. A total of 7,965 individuals fit into the prior three categories. This means that, from the December 2000 through May 2008 hiring classes, of all individuals who were involved in the police hiring process for the Rochester Police Department over half (51%) dropped out on their own volition.

The Rochester Police Department recently tried to address the general lack of attendance at the physical agility exam by changing its location from a college in a suburban location outside of Rochester to a high school located within the city. This may help to ameliorate many of the travel concerns of those in the city without reliable transportation. It would be highly beneficial if this recent data on attendance rates were examined to see how it compares with our listed rates. One other possible means to address attrition at this step in the recruitment process may be to examine the past data on applicant attendance and to identify specific days and times when applicants are most likely to appear for the exam and to pass it. Other ways the Rochester Police Department

has addressed the lack of attendance include providing handouts on the physical agility exam after candidates have completed the civil service exam, hosting physical agility workshop, providing videos on their website which illustrate the proper way to perform each exercise, and contacting applicants through both electronic and manual phone calls.

It seems as though the greatest impediment in the application process is the lack of a proper definition of what a police officer's role is in society. While officers have been portrayed in a myriad of fashions, the media most frequently promotes them as crime fighters. Such a role does not fully encapsulate even a fraction of the duties an officer performs. Departments need to inform the public of what they realistically wish to see in applicants and applicants need to be made aware of what policing entails (Vest, 2001). It seems likely that those who apply for the position with only a fraction of the knowledge of what policing entails will be at a higher risk for becoming disenchanting and subsequently dropping out of the process than those who are well informed (White & Escobar, 2008).

Conclusion

The ultimate goal of recruitment is to hire the best possible candidates; it is frequently assumed that the larger applicant pool a police department has, the greater choice the department will have when it comes to hiring decisions (White & Escobar, 2008; Ho, 2005). Of course, a large applicant pool is not necessarily the most ideal of scenarios: departments should focus on the quality of applicants, rather than quantity (Decicco, 2000; Decker & Huckabee, 1999).

In the last fifty years the police hiring process changed dramatically (Sanders et al., 1995). Departments are working continuously to develop more applicable measures to

test applicants with, including psychological tests designed to screen-in desirable candidates as well as tests designed specifically to assess police officer applicants (Inwald, 2008; Poland, 1978). If continual effort is put forth to ensure quality in the screening process this will only serve to aid departments in achieving stronger applicant pools (Ho, 2005; Vest, 2001; Decker & Huckabee, 1999).

STUDY THREE

Introduction

Study Two outlined the police hiring process and examined attrition by majority/majority status at each point in the process. Yet, the data outlined in study two has little utility for administrative purposes as it only provided the average rate of success across ten hiring classes. This data could be utilized to create a model that would have some administrative utility. To accomplish this, three separate models were created: one for total candidates, one for minority candidates, and one for majority candidates. Each of these three models would allow an individual to see the high, low, and average points of attrition based off of the December 2000 through May 2008 hiring classes' dataset.

In conducting this research, it was determined that a confidence interval would best illustrate the likely level of attrition at each point in the hiring process. That is to say, it would allow one a means to be reasonably confident to say, for example, if 50 people applied for the civil service exam one could expect somewhere between 33 and 42 to actually appear. This model could then have some use then in determining the allotment of resources at various steps throughout the recruitment process. In practice, if a certain number of individuals were expected to not show up for the physical agility exam, groups for the physical agility exam could be created which would be reflective of this level of

attrition. This would allow for fewer resources to be utilized than if groups were created under the assumption that everyone would appear.

That said, it was not enough to merely determine confidence intervals. A model where the number of individuals present at a certain step could be entered and with minimal math the output would be provided was also created. The manner in which this was accomplished is outlined in the method section below.

Method

Materials

Data obtained from the Rochester City Hall's Bureau of Human Resource Management on the hiring process from the December 2000 through May 2008 exam were utilized in the formation of the predictive model outlined in the procedure section below. In order to test the utility of this data, a FOIL request was applied for on the hiring data from November 2008 onward. This ultimately provided an additional three recruitment classes against which to test the three models: November 2008, May 2009, and November 2009. The remaining classes at the time this study was conducted were either ongoing or had just begun.

As with the data in Study Two, candidates were identified by their race with white/non-Hispanics considered majority and African American, Hispanic/Latino, Asian, and Native American candidates as minority. Points of attrition provided in this dataset include an applicant's invitation to the civil service exam, whether he or she appeared, the civil service exam passing rate, the invitation to the physical agility exam, whether an individual appeared for the physical agility exam, whether an individual passed the physical agility exam, whether an individual withdrew from the process, whether an

individual passed the medical and background investigation, and whether an individual were ultimately hired.

Procedure

It was determined that the predictive model would be created through first finding the confidence intervals for the total, minority, and majority candidates, respectively. A total of nine points of attrition were identified, and the mean and standard deviation for each of these points may be seen in Table 3.1. As data were only available in the aggregate form for the total who were invited to the civil service exam, only the model that examines total candidates includes that particular step.

Table 3.1 Mean and Standard Deviation for Hiring Process Population (December 2000 – May 2008 Classes)

Mean and Standard Deviation for Hiring Process Population						
	Total		Majority		Minority	
	\bar{x}	σ	\bar{x}	σ	\bar{x}	σ
Invited to Civil Service Exam vs. Appeared for Civil Service Exam	0.72	0.065				
Appeared for Civil Service Exam vs. Passed Civil Service Exam	0.83	0.036	0.89	0.028	0.65	0.077
Passed Civil Service Exam vs. Invited to Physical Agility Exam	0.76	0.389	0.66	0.439	1.17	0.412
Invited to Physical Agility Exam vs. Did Not Withdraw from Process	0.90	0.065	0.88	0.074	0.92	0.062
Did Not Withdraw from Process vs. Appeared for Agility Exam	0.56	0.066	0.58	0.071	0.54	0.90
Appeared for Agility Exam vs. Passed Agility Exam	0.60	0.88	0.66	0.095	0.49	0.108
Passed Agility Exam vs. Passed Medical Exam	0.94	0.026	0.95	0.027	0.93	0.041
Passed Medical Exam vs. Passed Background Exam	0.44	0.163	0.50	0.181	0.30	0.137
Passed Background Exam vs.	0.48	0.165	0.51	0.173	0.42	0.201

Hired						
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Due to limitations within the data set, this was a class-level analysis. Even though there were over 15,550 individuals who participated in the hiring process from December 2000 through May 2008, the sample size is equal to 10 as there were 10 classes within that period of time. In the creation of these three models, all classes were weighted equally. While this may cause some concern as, prior to July of 2007 exams occurred once a year, such a analysis is defensible as the more recent – smaller – classes are closer to the present time, and changes in the hiring process in the more recent classes make them more representative of current attrition than the older classes.

As the study utilized a small sample, and the mean and standard deviation were known, the equation utilized to find the confidence interval was as follows: $\bar{x} \pm z$ -critical $\left(\frac{\sigma}{\sqrt{n}}\right)$. In this instance, \bar{x} would equal the average rate of success within the sample for each point of attrition. The z-critical score is based off of the confidence level used for the two-tailed t-test, which is 80%. As the study has an n of 10 – and therefore 9 degrees of freedom – this gives the confidence interval a z-critical value of 1.38. The standard deviation of the population is illustrated by σ , which differs based on each of the separate values in each point of attrition for total, minority, and majority applicants.

This process was completed for each of the steps in the hiring process for total, minority, and majority candidates. Once data was complete, the found low and high ends were transcribed into another excel sheet, the attrition model. The attrition model was created so that, as an individual entered the number of individuals at point in the hiring process, the chart would display the likely number of individuals to continue onward, and

the likely minimum and maximum amount of individuals to continue. This was found by multiplying the number of individuals by the high and low confidence interval scores. The average number of those who passed was found by dividing the sum of the two confidence interval scores. As there is no actual way to test the utility of the model without using actual data, the final three classes - November 2008, May 2009, and November 2009 – were combined into one aggregate class with which to test the data.

Analysis

Table 3.2 contains the confidence intervals for the models used for total, majority, and minority candidates, respectively. In examining these data, note the variation between the low- and high-ends of the confidence interval. The greater the noted difference is between the two scores, the more variability that was present within the December 2000 through May 2008 data. In examining the variation between the low and high ends of the levels for Total, the most prominent point of variation is when an individual is processed (marked by passed civil service exam/invited to the physical agility exam). The variation in this instance is 0.59-0.93. Several other points, such as when an individual passed the background or is hired – passed medical/passed background and passed background/hired, respectively – also have a degree of variation, but not as wide a variation as the aforementioned processing point.

Table 3.2 Confidence Intervals for Total, Majority, and Minority Attrition Models

Confidence Intervals for Total, Majority, and Minority Candidates						
	Total Candidates		Majority Candidates		Minority Candidates	
Point of Attrition	High End	Low End	High End	Low End	High End	Low End
Invited to Civil Service Exam vs. Appeared for Civil Service	0.74	0.69				

Exam						
Appeared for Civil Service Exam vs. Passed Civil Service Exam	0.84	0.81	0.90	0.88	0.68	0.61
Passed Civil Service Exam vs. Invited to Physical Agility Exam	0.93	0.59	0.85	0.47	1.35	0.99
Invited to Physical Agility Exam vs. Did Not Withdraw from Process	0.93	0.87	0.92	0.85	0.95	0.90
Did Not Withdraw from Process vs. Appeared for Agility Exam	0.59	0.53	0.61	0.55	0.58	0.50
Appeared for Agility Exam vs. Passed Agility Exam	0.65	0.56	0.71	0.62	0.54	0.45
Passed Agility Exam vs. Passed Medical Exam	0.95	0.93	0.96	0.93	0.94	0.91
Passed Medical Exam vs. Passed Background Exam	0.51	0.37	0.58	0.42	0.36	0.24
Passed Background Exam vs. Hired	0.55	0.41	0.58	0.43	0.51	0.33

As with the column illustrating the confidence interval for total candidates, there is a high degree of variation in the point of processing for majority candidates. In this instance is 0.47-0.85. The only other point with a moderate degree of variation includes when an individual passed is hired. As majority candidates make up such a large percentage of the total amount of candidates, it seems that they have a greater impact on the shaping of the total model.

As with the prior two confidence levels there is a high degree of variability in the point of processing; this variability extends beyond 1.0 is because every minority candidate who received a passing score on the civil service exam was invited to the agility exam, additionally minority candidates who had passed the same civil service

exam in other locations may be included in this step as well. Other points of variation include being hired (passed background/hired), and passing the background investigation (passed medical/passed background).

Findings

Appendices I, J, and K provide the predictive models for majority, minority, and total candidates, respectively. As mentioned previously, the November 2008 and May and November 2009 classes were combined into one aggregate class. Table 3.3 provides the raw numbers for the aggregate class, as well as the high- and low-ends of the confidence interval and the average for majority candidates.

Table 3.3 Predicted Output for Majority Candidates

	Raw #:	High End:	Low End:	Average:
Total Appeared	2,522			
Passed Civil Service Exam	2,256	2,270	2,219	2,245
Processed	1,679	1,918	1,060	1,489
Did Not Withdraw	1,647	1,545	1,427	1,486
Appeared Agility Exam	1,007	1,005	906	955
Passed Agility Exam	629	715	624	670
Passed Medical Exam	601	604	585	594
Passed Background Process	222	349	252	301
Hired	35	129	95	112

From this aggregate class there were a total of four instances where the model provided a range where the actual number of people who participated in that particular recruitment hurdle fell into: passed the civil service exam, processed, passed the physical agility exam, and passed the medical exam. Thus, the majority predictive model was accurately able to predict attendance levels for 50% of the points of attrition. To draw

upon the three manners of attrition from the second study, it appears that the model was unable to predict with any real validity the number of individuals who voluntarily withdraw from the process or who are removed via departmental removal. It was, however, able to accurately predict failure within the hiring process for three out of four steps.

While the predictive model for majority candidates had an accuracy rating of 50%, this number did not appear translate across to the predictive model for minority applicants, located in Appendix J. The output for the aggregate class was provided below in Table 3.4. Out of eight points of attrition only one – processed – was accurately predicted, giving this model a success rate of 12.5%. It is important to note that the aggregate classes were unique from those included in the creation of the model in that in one of the aggregate classes no individuals were hired.

Table 3.4 Predicted Output for Minority Candidates

	Raw #:	High End:	Low End:	Average:
Total Appeared	708			
Passed Civil Service Exam	496	481	432	457
Processed	580	670	491	580
Did Not Withdraw	575	551	522	537
Appeared Agility Exam	421	334	288	311
Passed Agility Exam	267	227	189	208
Passed Medical Exam	259	251	243	247
Passed Background Process	149	93	62	78
Hired	7	76	49	63

The final, total predictive model is located in Appendix K; Table 3.5 provides the expected output for the three aggregated classes. The total model was slightly more

predictive than that for minority candidates, accurately predicting 25% of all point of attrition. It did appear to be remarkably close in the prediction of two other steps: total appeared for the civil service exam, and total who passed the medical exam, both of which were off by four or fewer. If these two points of attrition were to be considered, the model would have accurately predicted two out of four points of attrition that occur via candidate failure, one via voluntary removal and one via departmental withdraw.

Table 3.5 Predicted Output for Total Candidates

	Raw #:	High End:	Low End:	Average:
Total Applied	4,352			
Total Appeared	3,223	3220	3003	3112
Passed Civil Service Exam	2,752	2707	2611	2659
Processed	2,259	2559	1624	2092
Did Not Withdraw	2,222	2101	1965	2033
Appeared Agility Exam	1327	1311	1178	1244
Passed Agility Exam	795	849	743	796
Passed Medical Exam	759	755	739	747
Passed Background Process	270	387	281	334
Hired	42	149	111	130

Discussion

The success rates of the total, minority, and majority predictive models were 25%, 12.5%, and 50%, respectively. The models were designed to predict, with a confidence level of 80%, the minimum and maximum amount of individuals who could be present at the various points of attrition throughout the hiring process, yet they were able to accurately predict this in less than one-third of the points of attrition examined.

There are a number of variables that may have had an impact on the strength of the three models. Regarding the data used to create the models, the first seven of the ten classes – 2000-2006 – were held in December. Prior to July 2007 the civil service exam was only administered once a year at this particular time. This means that the model was primarily created based off of hiring processes that began in December when it was tested using hiring processes that occurred in either November or May. Despite combining the three classes this seasonally may still be present; it would be expected that there would be more similarities between November and December than December and May.

The second problem with the data set is that, although this study tested the results of over 15,500 individuals, their performance was divided into ten separate hiring processes. Thus, the true sample size in creating this confidence interval was 10. If information could be drawn upon from classes' further back, then the model would likely be more sensitive to actual trends in attrition. Of course, the police hiring process is a consistently evolving process. Differences have been noted in the administration of the test across the seasons. There have also been differences in what tests are given, who is processed based on civil service exam score, and who was allowed to participate in the process. For example, women were not officially allowed into the hiring process until 1972 and their increasing presence in the field since then means that older classes are based off of more male-dominated performance in comparison to more recent classes. That is not to say that the recruitment classes utilized to test this model were without their faults. As previously mentioned, the November 2008 recruitment class is unique in that no one from the class was hired.

All three models accurately predict the number of individuals who were processed. The reason why the model was so effective at predicting the levels for those who were processed is quite simple. The confidence level for these three models were so large that any data entered into the model for this point of attrition would create such a wide confidence interval that it would be extremely likely that the actual level of attrition would occur within the level simply by chance.

Conclusion

In creating three unique predictive models for the total, majority, and minority candidates of the police hiring process, a way was sought to make the dataset viable for administrative purposes. As the models were created based on the results of ten hiring processes there was not a large enough sample to really capture the points of attrition and the normal distribution of success which fall along each point. Because of this, areas where there was relatively low variability in performance resulted in confidence intervals that had too small a range to reasonably expect random samples to fall into, while areas where there was great variability – as seen in the processed scores – had confidence intervals which spread across such a wide breadth that it would be unlikely for a number to fall outside of their range.

A predictive model that accurately provides the expected range of attendance at the various points of attrition in the police hiring process is still an item that could have great administrative utility. While the utilization of confidence intervals did not appear to be a success in the creation of these models, there are other statistical measures which may result in better, more accurate models.

FUTURE RESEARCH AVENUES

The work conducted in this thesis brought up several points where further investigation may prove beneficial. In the first study the ratio of percentage of X [women, African Americans, Latinos] on the police department to their percentage of X in that department's community was examined. This provided a snapshot of how representation was at that particular point in time across the state of New York. However, it could be possible to compare representation across the state and across time through having census data and police representation data from multiple years. The Law Enforcement Management and Administrative Survey [LEMAS] contains information on the representation of every participating department within the United States. This survey is administered once every few years: 1987, 1990, 1993, 1996, 2000, 2003, and, most recently, 2007. By creating representation ratios of each of these years for all departments listed in the first study, the variation in growth of representation across departments could be examined; from this the impact that different department policies have had on representation may be illustrated.

The second study illustrated the incredibly high level of attrition that occurs during the police hiring process. Over 51% of all potential recruits voluntarily removed themselves from the process. In conducting this thesis, one initial goal was to interview those who had voluntarily removed themselves from the police hiring process. Unfortunately, due to constraints this was unable to be accomplished. However, included in Appendix L is the survey created for this study. The survey questions were designed to assess seven separate variables: organizational preparedness, personal preparedness, motivation, lack of passion, time, incapable, and competing jobs.

The initial variable, organizational preparedness, examines from a candidate's point of view how much effort the department put into providing the opportunity to succeed. This would include questions on whether or not candidates felt they were provided with sufficient information or materials. Personal preparedness would be whether an applicant felt that they themselves made a sufficient effort to succeed in the police hiring process and would include such questions as whether they studied or practiced for the civil service and physical agility exams, respectively. Motivation and lack of passion were somewhat similar variables in that each was designed to determine how strongly an individual desired to succeed in the hiring process and where they may have "burned out". Time, as the name implies, examines how big of a factor the police hiring process's length was in attrition amongst these applicants. The variable designed to measure whether an individual felt as though they were incapable of succeeding was created to measure, of those who voluntarily removed themselves, how many would have likely been unsuccessful had they attended the civil service, or physical agility, exam. The final variable, competing jobs, was designed to determine how many applicants may be looking for several avenues of work and to what extent the nature of the police hiring process serves as a detriment to retaining applicants.

As over half (51%) of all individuals in the hiring process had either applied but did not appear for the civil service exam, did not appear for the physical agility exam, or officially withdrew, there is a wealth of information that could be obtained on why applicants drop out at certain points and what could be done to promote retention. However, obtaining only information as to why people voluntarily removed themselves from the hiring process would provide an incomplete picture. Appendix M was created as

a means to interview those who have been hired and could serve as a counterpart by examining why certain individuals end up being successful in the hiring process.

Appendices L and M have a high degree of similarity; this overlap was intentional as it would be a benefit to compare the responses of those who voluntarily withdrew from the process and those who were hired when possible. It is likely that in many instances there would be similar responses between the two groups. Perhaps one of the greatest benefits which could be provided through the administration of Appendices L and M would be the garnering of information on the motivation people have for joining the Rochester Police Department and how candidates discovered how to enter into the process. This qualitative data could help to tailor recruitment efforts for future classes by focusing on the reasons why successful applicants were successful and utilizing the primary means by which applicants were informed about the position.

The final study provided three models of attrition for the Rochester Police Department's police hiring process. While these models did not appear to be very accurate at predicting attrition, one model in particular – majority – did perform fairly well in predicting attrition via failure in the hiring process. It may be beneficial in future research to gather data on attrition in the hiring process that is more descriptive. That is to say, it would be a benefit if data on applicants extended to more than just "Minority/Majority" status to include gender and race. It goes without saying that there are differences between genders and races – this difference extends to between different minorities. By constricting the labeling of applicants to Minority or Majority status a wealth of information is lost.

CONCLUDING REMARKS

In the conducting of these three studies there were two primary goals I sought to accomplish. First, I wanted to gain some indication of representation between departments throughout the state of New York. This was done through the utilization of census data and information provided by the New York State Division of Criminal Justice Services. From this, I was able to determine the relative representation of women, African Americans, and Latinos throughout the twenty largest cities – and two counties – of New York State. This data provided a useful means of comparing across cities and examining representation in a manner beyond raw numbers.

My second goal was to examine one department in great detail to gather information regarding the police hiring process which could then be applied to all departments. This was accomplished in the second study by examining the Rochester Police Department's hiring process. I was able to identify three separate means of attrition to occur within the hiring process: voluntary removal, departmental removal, and failure in the hiring process. In the latter, three areas were identified wherein attrition varied greatly between minority and majority candidates. This same data was utilized to create a predictive model in the third study which, while ultimately unsuccessful, brought to light a number of issues inherent with working with data where there are points of high and low discretion.

Three ways in which to build upon the work conducted in this thesis were provided upon completion of the three-part study portion of the thesis. Of primary importance are the two surveys listed, located in Appendices L and M, respectively. The

supplementation of this current research with qualitative data would help to provide not only a wealth of new information, but even more paths of research.

This thesis concludes with a list of recommendations which were developed throughout the course of this project. Many of these following recommendations were, at one point, presented to the New York State Municipal Police Training Council. The remaining of which were developed after the fact but, nonetheless, bring to light important policy issues regarding both recruitment and retention during the hiring process, and the retention of female officers.

RECOMMENDATIONS

Portions of this thesis were conducted as a collaborative effort with the New York State Division of Criminal Justice Services. Following the identification of a number of police departments who performed well in terms of representation in Study One, the Division of Criminal Justice Services conducted a series of interviews with the aforementioned departments. A number of recommendations were developed drawing upon information obtained within these interviews and from information gleaned in conducting these studies. Recommendations I.A. – V.C. were presented to the New York State Municipal Police Training Council. The recommendations developed after this presentation and begin at VI.

I. Recommendations Regarding Initial Recruitment and Marketing Strategies

- A. Identify department needs and allot resources appropriately. Developing a large and qualified applicant pool goes hand-in-hand with the amount of resources a department is willing to put into recruitment. Despite there

being a ubiquitous drop in the levels of applicants these past few years, many departments continue to reduce their recruitment budgets. In the span of two years, one department interviewed reduced their recruitment budget by 75%. It is of the utmost importance that departments understand the importance of resources and marketing in the development of a large and qualified applicant pool and provide such goods accordingly.

- B. Track application submissions. It is likely that departments receive two surges in applications: initially when these applications become available and when there are several days remaining before the deadline. While these trends seem likely, it may be best for departments to track when they receive applications then use that data to identify times to stress recruitment efforts.
- C. Targeted Advertisement. A myriad of reasons exist as to why people choose to become police officers. Departments should identify the top few reasons why officers join and tailor advertisements to express and support those values. Should there be a difference demographically in why and how officers chose the position, advertisements may be tailored in a manner which would promote representation.
- D. Job Fairs, Mall Tables. Like many other departments, the Rochester Police Department makes an appearance at almost every local career fair. These events – especially those sponsored by nearby colleges – draw a large number of eligible men and women from the community. Recruitment efforts at local shopping malls may also be effective; departments should

be present within the malls at their peak times for young adults: Friday and Saturday evenings.

- E. Professional Organizations, Churches, Fraternities/Sororities, Community Groups. Several Departments interviewed expressly stated the importance of reaching out to local professional organizations and other community groups. In doing so, Departments create greater ties in the community.
- F. Department Open House/Information Sessions. Departments may consider holding several information sessions prior to, and during, recruitment efforts to provide interested parties with a realistic portrayal of the police officer position.
- G. Meet with applicants one-on-one to discuss what they are looking for out of the career. The United States Army allows interested parties the chance to meet with a recruiter one-on-one to discuss career opportunities. If these interviews were conducted in conjunction with college career fairs it may provide individuals an increased interest in pursuing a career in law enforcement.
- H. Current Officers. Many individuals apply to become officers because they know someone currently serving. Shortly before a surge in applications is to occur, departments may wish to send out a memo reminding officers to suggest policing as a possible career choice to others. The New York State Police currently provides all employees referral cards to give to interested parties.

- I. Internships. Internships allow departments to draw upon a pool of individuals already interested in policing as a career. The time a student spends on their internship should provide them with a proper expectation of what to expect should they participate in the police recruitment process.
- J. Develop and maintain a more visible presence within the community. Through attending community meetings and other visible measures officers will encourage others to engage in policing. The New York State Police encourages working with local youth organizations; this serves to promote the department as a future viable career for youths.
- K. Radio & Newspaper Advertisements. Radio and Newspaper promotions appear to be the two most traditional passive means by which to promote recruitment. While many radio stations will promote recruitment free of charge, stations may be unreliable and may not consistently air advertisements. Local newspaper promotion is likely a more effective medium – these advertisements are much more likely to reach a larger, applicable local population than would be reached through radio. However, the utility of both aforementioned recruitment strategies appears to be limited with the massive popularity of more modern technologies.
- L. Television. Depending on department budget commercials may not be a practical option. However, it may be possible for departments to work in conjunction with local media in developing an interest piece, regarding the police recruitment process and the civil service exam.

- M. Internet. The use of the internet in today's society is so ubiquitous that the overwhelming majority of departments already use it as a recruitment tool in some manner or another. There are a myriad of websites where departments may post recruitment information and a link to their online application. What appears by and large to be an untapped resource by departments are "social networking" sites such as Facebook, Twitter and Myspace. These sites could provide recruiters a means through which to answer applicant questions and concerns in a more immediate fashion as well as reach a larger audience. It would be beneficial if departments were to include a diverse group of officers within this medium to ensure that all questions may be adequately answered from those who may have experienced concerns.
- N. "Smart" phone technology. The recent proliferation of "Smart" phones provides departments with a new medium to promote the field. Departments should consider ways to exploit the popularity surrounding these phones, particularly regarding the usage of applications – or "apps".
- O. Make yourself available. It goes without saying that interested parties need to know how to get in contact with recruiters and not have too hard of a time doing so. Applicants tend to become discouraged if they find that they are not easily able to get in contact with recruiters and will thus be more likely to withdraw from the process.

II. **Recommendations Regarding the Civil Service Exam Application**

- A. The removal of paper applications. While this proposal may initially sound absurd, the simple fact is that the overwhelming majority of applications received today are submitted electronically. For the most recent New York State Police exam all but 50 of the 27,900 applications received (.0017%) were submitted online. Furthermore, through the removal of paper applications departments will be able to make better use of current technology, as described in Section V-B.
- B. Job Application Kiosks at Departments. With the removal of paper applications kiosks could provide those without immediate access to the internet a means to apply. Additionally, kiosks would promote a greater number of applications through their availability; departments could bring these mobile machines with them to career fairs and other recruitment endeavors.
- C. Reduce the time that the application is open for. A significant level of attrition occurs when comparing those who have applied for, and those who appear for, the civil service exam. This is in part due to the length of time applications are accepted, with some departments accepting applications for an upcoming civil service exam the day after the prior exam. By reducing the overall time applications are open for there should be a reduction in attrition.
- D. Decrease the date between the application deadline and the examination date. If possible, it may be best to reduce the time between the application deadline for the civil service exam and the actual test to as short a length

as possible. As previously mentioned, the smaller amount of time there is between the exam and its deadline, the less likely it is that candidates will forget about, or lose interest in, the exam. Although they do not use the state-created civil service exam, the Buffalo Police Department has an ideal length of time between the deadline and examination date: the deadline for registration for their January 13th exam was January 4th.

- E. Include a human element. Applicants will feel as though they have more of a stake in the recruitment process if they interact with recruiters prior to, and following, the civil service exam. The mere act of speaking with an actual person may serve to decrease attrition, while allowing recruiters to identify issues which may arise in an applicant's ability to take the exam. Departments should ensure that applicants are working with a diverse group of officers. This may help them to see that the department is not as homogenous as they may believe it to be and make them feel more welcome.

III. **Recommendations Regarding the Civil Service Exam**

- A. Hold multiple seminars to prepare applicants for the format of the Civil Service Exam. The Mount Vernon and Rochester Police Departments hold several seminars prior to the civil service exam which provide applicants with information on the exam as well as proper test strategies. This familiarization will only promote applicant success; additionally, these sessions provide a chance for recruiters and applicants to interact with one another. One important note of caution is that, while it is important to

provide applicants with the knowledge of how to succeed in the civil service exam, it is essential that these sessions do not run for too long; it should take no longer than two-hours to go over all relevant information. This information may also be provided online, as the New York State Police provides on their website. Additionally, these sessions should be held in a location that is easily accessible for applicants.

- B. House the Civil Service Exam in an easily found location in close proximity to your Department. Typically, large-scale police departments are found in city centers. They are close to public transit and parking. Despite this, exams are not always held in the city and may be held in hard-to-reach suburban locations. The Mount Vernon Police Department holds its civil service and physical agility exams in a high school in close proximity to the Police Department. This ameliorates transportation concerns for those who do not have cars within the city and also allows applicants to develop a sense of familiarity with the location they wish to work in. As the state holds its civil service exam on a Saturday morning, the risk of parking and traffic concerns among applicants is also reduced.
- C. Do not hold the civil service exam on an as-needed basis. Although Departments can hold their exams as little as once every four years if they are using the New York State civil service exam, it is strongly encouraged that medium to large-sized departments hold exams every year. Doing so will reduce the risk a Department may face where a large number of officers may retire at the same time. It is far more prudent to recruit a

small number of officers every year than a large group of officers once every 4-10 years.

D. Utilize the State-created civil service exams. Several benefits lie in using the state-created civil service exam, among them are:

- i. *Cross-filing:* Rochester is one of many departments which make use of cross-filing. This allows the department to draw upon a larger applicant pool. Applicants are able to take the exam at any number of locations and submit it to other departments as well.
- ii. *Ensure proper timing for your civil service exam:* One problem that may arise when administering any form of exam is the conflict of schedule with certain holidays. While the state holds two civil service exams per year neither are held around any major holiday. This reduces the likelihood that applicants will be unable to attend due to a religious or family reason. It is important whenever scheduling any form of test to assure that no major holidays fall around that time.

E. A note regarding community/residency preference. In order to develop and maintain a department that is representative of the community it serves it may be prudent to subdivide recruitment lists by those who live within the city and those who live outside of it. This is the method utilized by Buffalo, Hempstead Village, and Mount Vernon; they provide preferential hiring to those on the city lists first – barring consent decree needs. Of course, if a department decides to utilize residency preference it is of the

utmost importance that they mention this on all hiring materials so that applicants are not falsely lead.

IV. Recommendations regarding the physical agility exam

A. Hold multiple seminars to prepare applicants for the physical agility exam.

The Rochester Police Department currently holds several seminars prior to their physical agility exam. These seminars are designed to provide applicants with the knowledge of how to properly perform the exercises contained within the physical agility exam as well as basic knowledge on how to properly train for the exam. It may be beneficial to have several trainers present, the more diverse the training, the more likely that an applicant will feel some connection with the position.

B. House the physical agility exam in an easy to find location in close

proximity to your Department. Typically, large-scale police departments are found in city centers. They are close to public transit and parking.

Despite this, exams are not always held in the city and may be held in hard to reach suburban locations. The Mount Vernon Police Department holds its civil service exam and physical agility exam at a high school in close proximity to the Police Department.

C. Foster the sense of camaraderie that may appear during the physical agility

exam. In their physical agility exam, the Rochester Police Department maintains medium-sized groups of 10-15 applicants. In maintaining groups of this size there is an increased likelihood that applicants will cheer for one-another and encourage each other to continue on. As this

exam is both physically and mentally straining, this boost to moral may be what some applicants need to succeed.

- D. Make use of the Cooper Standards. Cooper Standards are the most commonly used measures of fitness for male and female candidates. All departments interviewed utilized these measures, and their usage extends to Fire Departments and the military. Their ubiquitous presence in law enforcement would minimize any chance of litigation that could otherwise arise from other assessments.
- E. Provide a retest. It appears that many applicants are not fully prepared when they first take the physical agility exam. By providing a re-test in the following three weeks, applicants will have sufficient time to improve. If applicants do not arrive, or pass, at least they have been given another chance to prove themselves. Mount Vernon currently conducts a practice physical agility exam; if individuals pass this practice test then they do not have to appear for the actual exam. One agency interviewed previously allowed applicants to take the exam a second time if they failed.

V. **Recommendations regarding other aspects of the recruitment process**

- A. Maintain proper records. By maintaining organized records departments will be able to identify attrition and failure at every step in their recruitment process. This data may further be utilized to identify strengths and weaknesses in their process and to accurately assess the impact of any implemented changes.
- B. Keep applicants informed:

i. *Computer Technology.* As mentioned in Section II-A, the removal of paper applications would allow departments to utilize computer technology in a more effective manner. Upon completion of the online application for the Civil Service Exam, applicants could be provided a specific username and password for a site where applicants could go to receive individualized status updates on their application process. This website would ease many concerns applicants have about being left in the dark during the recruitment process, as well as provide them with a realistic timeframe for recruitment.

ii. *Provide applicants with relevant information regarding the process.* Departments should, at the very least, develop and maintain a webpage devoted to their recruitment process and provide applicants with a variety of links regarding all the steps in that process. This website could contain testimonials from current officers – including women and minorities - about the benefits of the job, short films on how to properly perform the physical agility exam exercises, and test strategies for the civil service exam. The Rochester Police Department currently has a strong site for such information:

<http://www.cityofrochester.gov/article.aspx?id=8589937332>

iii. *Utilize Current Technology.* As previously mentioned in Section II-E, applicants need to be in regular contact with recruiters. Of

course, this is not always feasible. For the transmission of certain information, the Rochester Police Department makes use of hyper-reach; this and other automated tools appear promising for informing large applicant pools with recruitment updates.

- C. A note regarding laterals. Lateral transfers have a number of benefits; they typically require less training and are familiar with the job already. However, if a department decides to hire a lateral transfer, they should ensure that the hiring and training process that applicant went through is similar to their own.

VI. **Recommendations Designed to Promote the Recruitment and Retention of Female Officers**

- A. Institute an Affirmative Action policy that focuses on female applicants. Affirmative Action lists do typically breed feelings of unequal treatment among patrol officers, but no data has indicated that individuals hired under such policies are poorer quality officers than their peers (Haarr, 1997). These policies have, however, been linked with an increase in female officers; one of the greatest determinants of the representation of females on a department is whether an affirmative action policy is currently in place (Rabe-Hemp, 2008a; Sklansky, 2006; Zhao et al., 2005). It is, therefore, highly recommended that departments who do not have an affirmative action policy addressing women should implement one.
- B. Institute a written pregnancy policy. Most law enforcement agencies currently do not have a written policy for pregnant officers (Lonsway,

2006). This is highly troubling considering that two of the most commonly cited reasons for attrition within policing among female officers are pregnancy and childcare issues (Rabe-Hemp, 2008a; Lonsway, 2006; Franklin, 2005; Dick & Jankowicz, 2001; Dantzker & Kubin, 1998). In formally addressing pregnancy, departments will help alleviate concerns some women may have. The International Association of Chiefs of Police recently created a model policy that addresses female officer pregnancy in a comprehensive manner.

- C. Ensure that female officers are provided equal access to proper-fitting uniforms and equipment. Although men make up the majority of the department, it is important that uniforms ordered are tailored for women as well. It has been found that women in some departments were required to wear uniforms tailored to men, which were uncomfortable and ill-fitting (Rabe-Hemp, 2008a; Lonsway, 2006; Hunt, 1990). While females may not make up a large percentage of the agency, it goes without saying that every officer should be provided access to a proper-fitting uniform, regardless of gender.
- D. Use General Fitness Measures – such as the Cooper Standards – instead of Physical Fitness (strength) Tests. While physical fitness tests emphasizing strength may have some face validity in law enforcement, their ability to measure performance pales when compared to general fitness measures, such as the Cooper Standards (Lonsway, 2003). Indeed, strength tests – which utilize one cutoff score for all participants – have a noted negative

impact on the representation of women: departments who utilize such tests are, on average, 10.9% female compared to the 15.8% average for departments who utilize other fitness standards (Lonsway, 2003).

- E. Adjust the Cooper Standards. While the Cooper Standards are designed to measure general fitness, many applicants train for the test; it is possible to argue that the test does not measure latent fitness so much as how long and intensive one's training has been in the weeks leading up to the exam. With this in mind, it is possible to slightly alter the way in which the Cooper Test is given to greatly improve the number of applicants while not sacrificing the quality of applicants.

With the training that occurs in the academy, all applicants are expected to make great strides in their fitness levels. For instance, the Rochester Police Department requires that applicants must pass the Cooper Standards at 40% as part of the requirements to gain entry into the Academy; these same applicants must then pass the Standards at 60% in order to complete the Academy. This same standard is held for many departments throughout the country.

With this in mind, it is entirely possible that an applicant may be unable to pass at 40% and then, with training, pass at 60%. What is provided, therefore, is a proposed new model for departments who use the Cooper Standards. It is suggested that departments create two lists; everyone who passes the Cooper Standards at 40% is placed on list 'A'. List 'B' would consist of individuals who, on one or more portions of the test, scored

between 30-40%. These individuals could then be organized based on their performance on the test, as is done with the Civil Service Exam.

Utilizing this model, it would be possible for those who were unable to do that last pushup or sit-up to be considered – these individuals have the ability to succeed, they just needed slightly more time to train.

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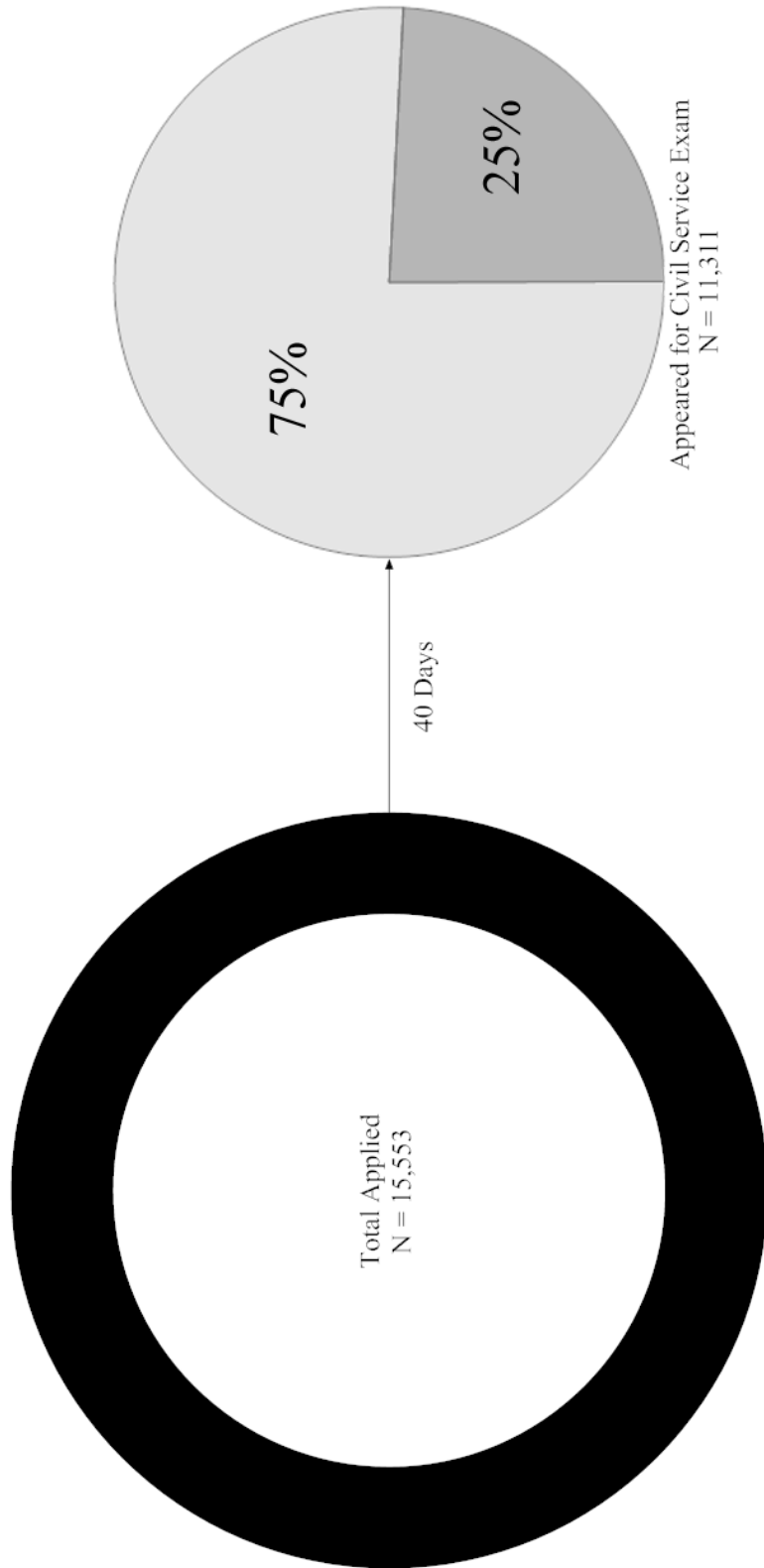
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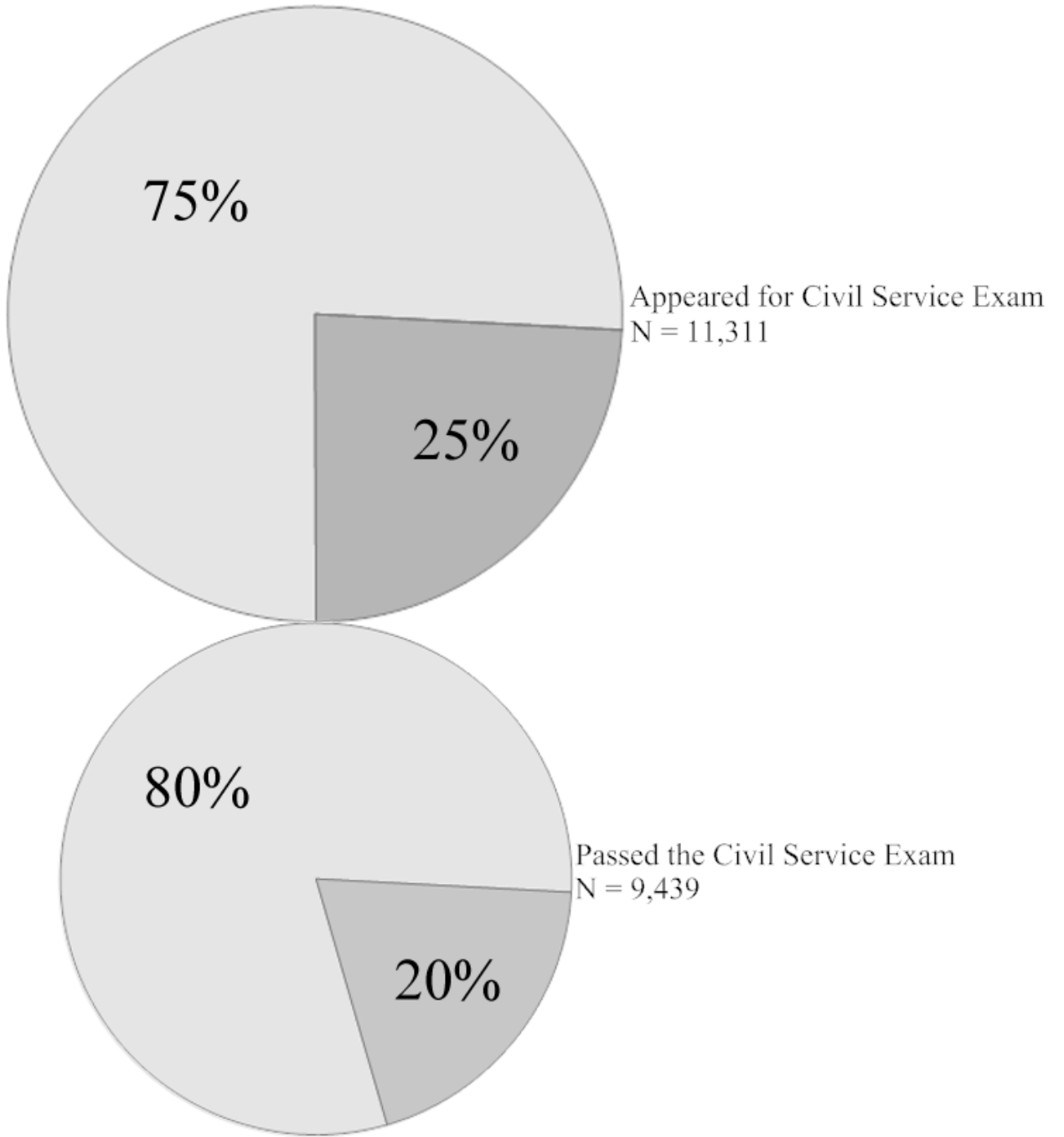
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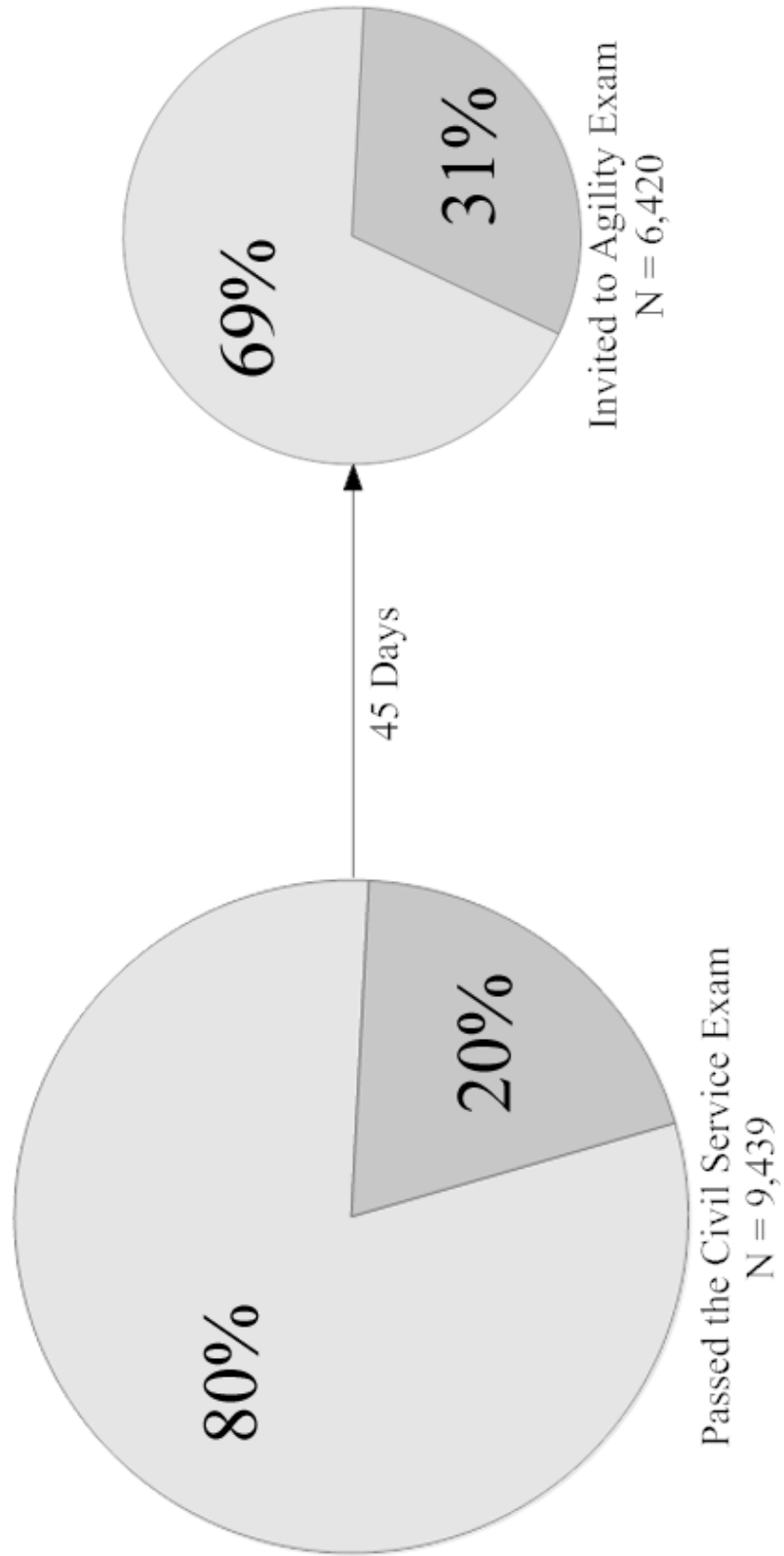
APPENDIX A



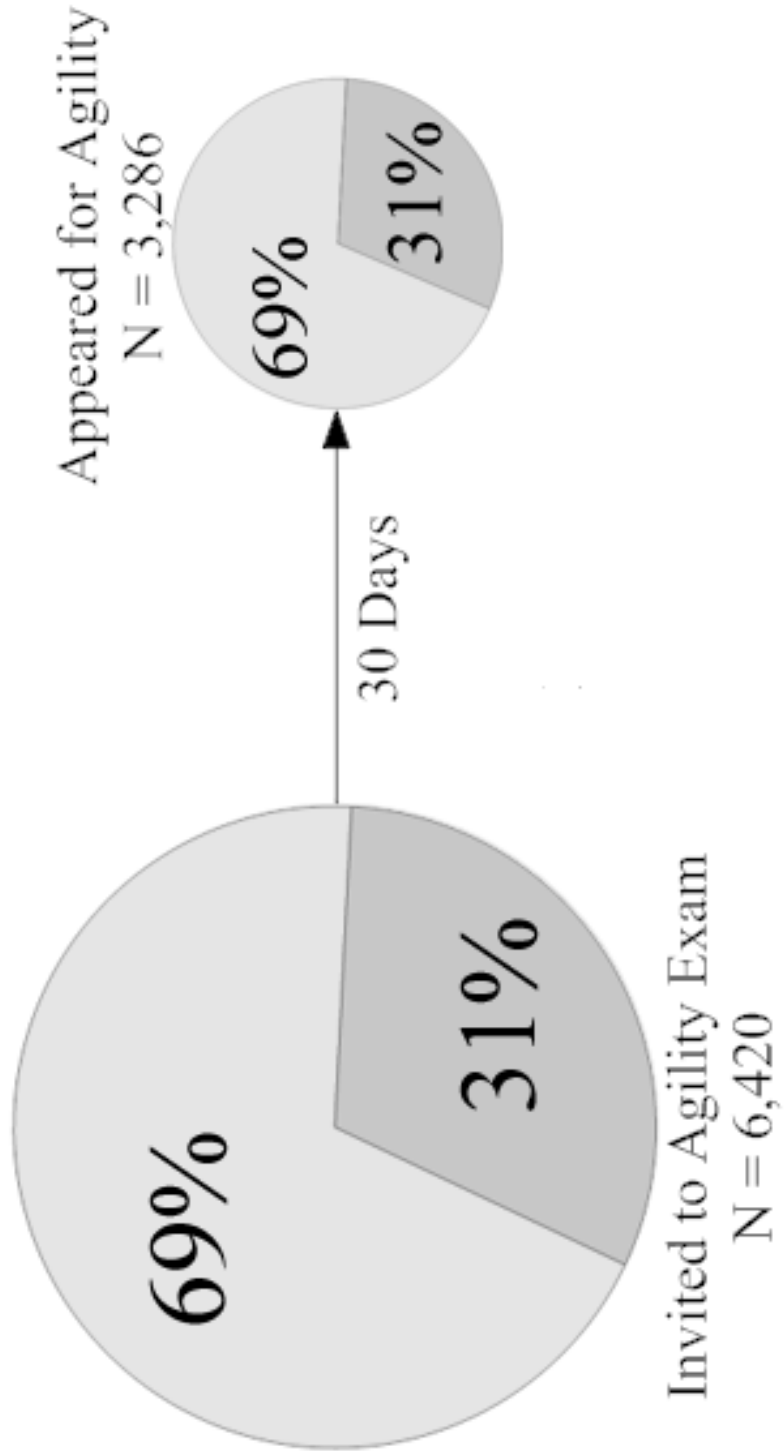
APPENDIX B



APPENDIX C



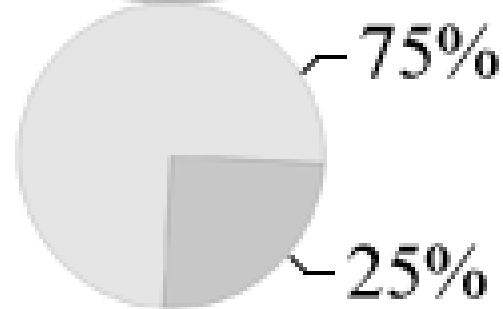
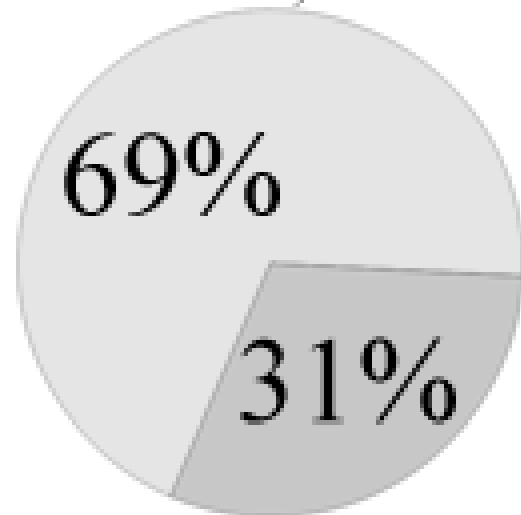
APPENDIX D



APPENDIX E

Appeared for Agility

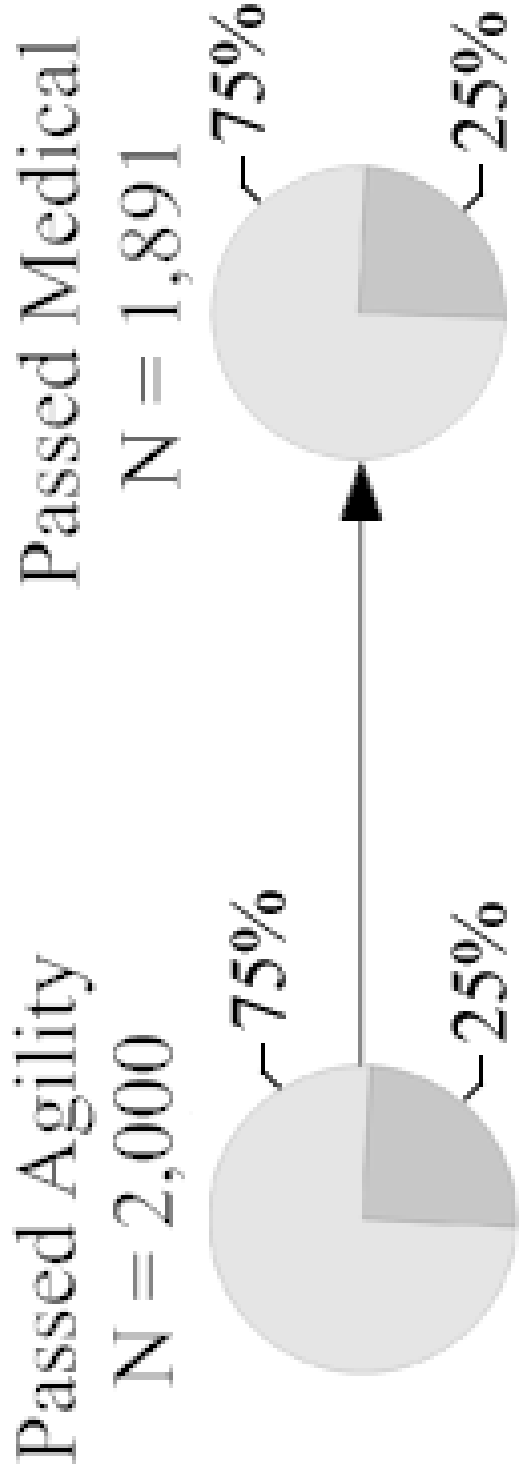
N = 3,286



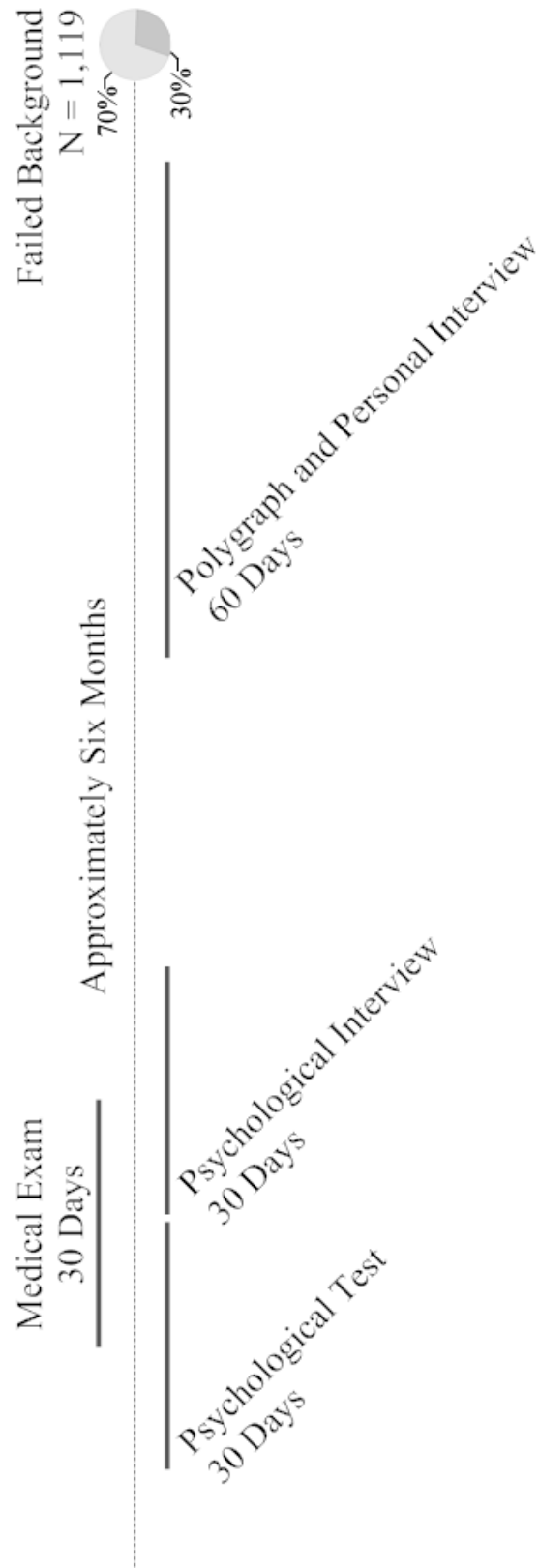
Passed Agility

N = 2,000

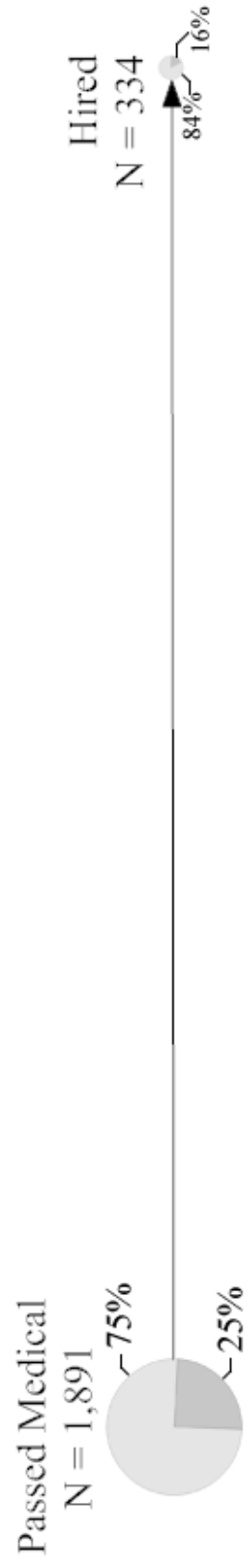
APPENDIX F



APPENDIX G



APPENDIX H



APPENDIX I

Predictive Model for Majority Candidates				
		High End:	Low End:	Average:
Total Appeared	N1			
Passed Civil Service Exam	N2	$L1=N1*0.90$	$H1=N1*0.88$	$A1=(L1+H1)/2$
Processed	N3	$L2=N2*0.85$	$H2=N2*0.47$	$A2=(L2+H2)/2$
Did Not Withdraw	N4	$L3=N3*0.92$	$H3=N3*0.85$	$A3=(L3+H3)/2$
Appeared Agility Exam	N5	$L4=N4*0.61$	$H4=N4*0.55$	$A4=(L4+H4)/2$
Passed Agility Exam	N6	$L5=N5*0.71$	$H5=N5*0.62$	$A5=(L5+H5)/2$
Passed Medical Exam	N7	$L6=N6*0.96$	$H6=N6*0.93$	$A6=(L6+H6)/2$
Passed Background Process	N8	$L7=N7*0.58$	$H7=N7*0.42$	$A7=(L7+H7)/2$
Hired		$L8=N8*0.58$	$H8=N8*0.43$	$A8=(L8+H8)/2$

APPENDIX J

Predictive Model for Minority Candidates				
		High End:	Low End:	Average:
Total Appeared	N1			
Passed Civil Service Exam	N2	$L1=N1*0.68$	$H1=N1*0.61$	$A1=(L1+H1)/2$
Processed	N3	$L2=N2*1.35$	$H2=N2*0.99$	$A2=(L2+H2)/2$
Did Not Withdraw	N4	$L3=N3*0.95$	$H3=N3*0.90$	$A3=(L3+H3)/2$
Appeared Agility Exam	N5	$L4=N4*0.58$	$H4=N4*0.50$	$A4=(L4+H4)/2$
Passed Agility Exam	N6	$L5=N5*0.54$	$H5=N5*0.45$	$A5=(L5+H5)/2$
Passed Medical Exam	N7	$L6=N6*0.94$	$H6=N6*0.91$	$A6=(L6+H6)/2$
Passed Background Process	N8	$L7=N7*0.36$	$H7=N7*0.24$	$A7=(L7+H7)/2$
Hired		$L8=N8*0.51$	$H8=N8*0.33$	$A8=(L8+H8)/2$

APPENDIX K

Predictive Model for Total Candidates				
		High End:	Low End:	Average:
Total Applied	N1			
Total Appeared	N2	$L1=N1*0.74$	$H1=N1*0.69$	$A1=(L1+H1)/2$
Passed Civil Service Exam	N3	$L2=N1*0.84$	$H2=N1*0.81$	$A2=(L2+H2)/2$
Processed	N4	$L3=N1*0.93$	$H3=N1*0.59$	$A3=(L3+H3)/2$
Did Not Withdraw	N5	$L4=N1*0.93$	$H4=N1*0.87$	$A4=(L4+H4)/2$
Appeared Agility Exam	N6	$L5=N1*0.59$	$H5=N1*0.53$	$A5=(L5+H5)/2$
Passed Agility Exam	N7	$L6=N1*0.64$	$H6=N1*0.56$	$A6=(L6+H6)/2$
Passed Medical Exam	N8	$L7=N1*0.95$	$H7=N1*0.93$	$A7=(L7+H7)/2$
Passed Background Process	N9	$L8=N1*0.51$	$H8=N1*0.37$	$A8=(L8+H8)/2$
Hired		$L9=N1*0.55$	$H9=N1*0.41$	$A9=(L9+H9)/2$

APPENDIX L

Sample Phone Interview Survey & Consent Form

Hello, my name is Michelle Comeau and I am a researcher at RIT. I am currently working with the Rochester Police Department and the New York State Division of Criminal Justice Services in analyzing the police hiring process. Your name was obtained through City of Rochester records identifying you as an individual recently hired by the Rochester Police Department. I would like to ask several questions on your experiences in applying, all of the information you provide to me will be confidential and anonymous. Your participation is completely voluntary and you can refuse to answer any of these questions. All told, this call should take no more than five minutes of your time. Is that alright?

No: All right then, thank you for your time.

Introductory Questions

1. What made you become interested in police work?
 - a. What, if any, prior experiences do you have interacting with members of law enforcement?
2. How did you learn about the position?
3. What made you decide to apply for the Rochester Police Department?
4. Have you applied as a police officer in this, or another, department previously?
5. When did you apply for the Civil Service Exam?
6. At what point did you leave the hiring process?

- a. Why did you stop pursuing this job?

If Did Not Appear for Civil Service Exam

1. Did you attend the Civil Service Exam seminar offered by the Rochester Police Department?
 - a. Was there anything that impeded you from attending the seminar?
 - b. Do you feel that the seminar provided you with sufficient information on what would be contained within the Civil Service Exam?
 - i. No: What do you feel was lacking?
2. Did the Rochester Police Department provide you with any materials containing information regarding the components of the Civil Service Exam?
 - a. No: If provided this information do you feel that you would have been sufficiently prepared for the Civil Service Exam?
 - b. Yes: Do you feel that this information provided you with sufficient information on what would be contained within the Civil Service Exam?
3. Did you study for the Civil Service Exam?
4. Were you aware of the date and time of the Civil Service Exam?
5. What, if anything, prevented you from attending the Civil Service Exam?
 - a. If Nothing: Why didn't you attend the Civil Service Exam?
 - b. What could have been done that would have made you attend the Civil Service Exam?

If Did Not Appear for Physical Agility Exam

1. Did you attend the Physical Agility Exam seminar offered by the Rochester Police Department?
 - a. Was there anything that impeded you from attending the seminar?
 - b. Do you feel that the seminar provided you with sufficient information on what the Physical Agility Exam consisted of?
 - i. No: What do you feel was lacking?
2. Did the Rochester Police Department provide you with any materials containing information regarding the components of the Physical Agility Exam?
 - a. No: If provided this information do you feel that you would have been sufficiently prepared for the Physical Agility Exam?
 - b. Yes: Do you feel that this information provided you with sufficient information on what would be contained within the Physical Agility Exam?
3. Did you train for the Physical Agility Exam?
 - a. At what point did you begin training for the Physical Agility Exam?
 - b. Do you feel you were provided sufficient time to train?
4. Were you aware of the date and time of the Physical Agility Exam?
5. What, if anything, prevented you from attending the Physical Agility Exam?
 - a. If Nothing: Why didn't you attend the Physical Agility Exam?
 - b. What could have been done that would have made you attend the Physical Agility Exam?

If Officially Withdrew from the Process

1. What made you decide to leave the police hiring process?
2. What could have been done that would have made you continue on in the hiring process?
3. Was there anything that impeded you from continuing the police hiring process?

Ending Questions

1. How much of a problem was the length of time of the hiring process for you?
 - a. To what extent do you feel that time played a role in your decision to withdraw?
2. What did you think of the process prior to your withdrawal?
3. In what ways do you feel the hiring process is effective?
 - a. Can you provide examples?
4. In what ways do you feel the hiring process is ineffective?
 - a. Can you provide examples?
5. Do you have anything you would want me to say to those in charge of recruitment about your recruitment experience?
6. At the time you applied and were involved in the Rochester Police Department's hiring process were you also looking at other jobs?
7. Are you working now?
 - a. What kind of work are you doing?
 - b. Are you currently working full or part time?
8. My final question is purely a means to obtain demographic information and you do not need to answer if you do not want to.

- a. What would you define your race or ethnicity as?
- b. What would you identify your gender as?

Thank you for your time, if you would like to know the findings of my study you may provide me with an email address and upon its completion I can send you my results.

Thank you again and have a wonderful day.

Appendix M

Sample Phone Interview Survey & Consent Form

Hello, my name is Michelle Comeau and I am a researcher at RIT. I am currently working with the Rochester Police Department and the New York State Division of Criminal Justice Services in analyzing the police hiring process. Your name was obtained through City of Rochester records identifying you as an applicant and/or participant in the Rochester Police Department's hiring process. I would like to ask several questions on your experiences in applying, all of the information you provide to me will be confidential and anonymous. Your participation is completely voluntary and you can refuse to answer any of these questions. All told, this call should take no more than five minutes of your time. Is that alright?

Introductory Questions

1. What made you become interested in police work?
 - a. What, if any, prior experiences do you have interacting with members of law enforcement?
2. How did you learn about the position?
3. What made you decide to apply for the Rochester Police Department?
4. Have you applied as a police officer in this, or another, department previously?
5. When did you apply for the Civil Service Exam?

Civil Service Exam

1. Did you attend the Civil Service Exam seminar offered by the Rochester Police Department?
 - a. Was there anything that impeded you from attending the seminar?
 - b. Do you feel that the seminar provided you with sufficient information on what would be contained within the Civil Service Exam?
 - i. No: What do you feel was lacking?
2. Did the Rochester Police Department provide you with any materials containing information regarding the components of the Civil Service Exam?
 - a. No: If provided this information do you feel that you would have been sufficiently prepared for the Civil Service Exam?
 - b. Yes: Do you feel that this information provided you with sufficient information on what would be contained within the Civil Service Exam?
3. Did you study for the Civil Service Exam?

Physical Agility Exam

1. Did you attend the Physical Agility Exam seminar offered by the Rochester Police Department?
 - a. Was there anything that impeded you from attending the seminar?
 - b. Do you feel that the seminar provided you with sufficient information on what the Physical Agility Exam consisted of?
 - i. No: What do you feel was lacking?
2. Did the Rochester Police Department provide you with any materials containing information regarding the components of the Physical Agility Exam?

- a. No: If provided this information do you feel that you would have been sufficiently prepared for the Physical Agility Exam?
 - b. Yes: Do you feel that this information provided you with sufficient information on what would be contained within the Physical Agility Exam?
3. Did you train for the Physical Agility Exam?
- a. At what point did you begin training for the Physical Agility Exam?
 - b. Do you feel you were provided sufficient time to train?

Ending Questions

1. How much of a problem was the length of time of the hiring process for you?
2. What did you think of the hiring process?
3. In what ways do you feel the hiring process is effective?
 - a. Can you provide examples?
4. In what ways do you feel the hiring process is ineffective?
 - a. Can you provide examples?
5. What do you believe helped you to be successful in the hiring process?
6. Do you have anything you would want me to say to those in charge of recruitment about your recruitment experience?
7. At the time you applied and were involved in the Rochester Police Department's hiring process were you also looking at other jobs?
8. My final question is purely a means to obtain demographic information and you do not need to answer if you do not want to.

- a. What would you define your race or ethnicity as?
- b. What would you identify your gender as?