

The Pennsylvania Police Accreditation Evaluation

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John Krimmel
Donna Kochis
Paul Lindenmuth
Peter Morreale

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Chapter One: Introduction

Abstract: Police accreditation refers to the process where agencies are evaluated against established criteria set by and verified by an independent body. Accordingly, the police agency accepts a clear set of policy guidelines that represent a level of quality service delivery. The impetus for accreditation came from the Pennsylvania Law Enforcement Accreditation Commission (PLEAC) which consists of members drawn from the Pennsylvania Chiefs of Police Association. The Commission members developed and maintained a formal accreditation process whereby police agencies in the state can apply for review and accreditation. The standards developed by PLEAC are guidelines for what should be done, not how they should be done. This allows for policy compliance at the same time permits independence at the agency level.

The growth of professionalism and police accreditation

The ministry, not law or medicine, is the oldest of the learned professions in America. According to Sullivan (1995) the earliest institutions of higher education in America, including Harvard and Yale universities, were founded expressly to train ministers. Since the seventeenth century Americans continued to build liberal arts colleges designed to train ministers, teachers and missionaries. The term profession is religious in origin as it suggests an act of commitment to a certain way of life spurred from a calling rather than an action imposed by economic necessity. Indeed, the earliest form of intellectual life in America was derived from the clergy.

With the rise of intellectual centers in medieval Europe, a distinction was made between the university and the guild. Where the university was dominated by the church the guild was comprised of artists and tradesmen (Larson 1977). What separated the professional elites from the artists and tradesmen was a liberal education. In America higher education, under the tutelage of the church, was essentially classical. That is studies were centered on teaching classic literature. It was thought that an education in the classics would lead to the formation of a clergyman or gentlemen with high status in the community. Generally, prior to the industrial revolution, emerging professions were

limited to divinity, university teaching and the law. In England, professional status was also achieved through a career in government service, the military or medicine.

Macdonald (1995) posits a thoughtful question that helps to bring us to the discussion of where police professionalism fits into the matrix. “What are the circumstances in which people in an occupation attempt to turn it into a profession and themselves into professional people?” Rhetorically then, how is it that professors, lawyers, physicians and public servants became professional? Samuel Walker (1977: 33) wrote, “The idea of policing as a profession began to emerge slowly in the latter part of the nineteenth century.” City life in America from 1860 to 1870 was fraught with vice, open violations of liquor ordinances and unruly behavior by the lower class.

In order to protect righteous citizens from the scourge of the lower class, police departments were formed in eleven American cities during the 1860s and 1870s (Price 1977). Police were put in the position of controlling the lower class and spared little force controlling their behavior. Regardless of the intense level of lower class dissatisfaction and lack of acceptance of the authority with the police a “professional” preventative police was created during this decade. Deaken (1988) argues that police professionalism was a direct result of the “Progressive” movement designed to remove politics from government. The progressive campaign was a loose alliance of Protestant clergy, lawyers and businessmen who set out to suppress vice and moral degeneration of America. The progressives were second generation Americans who were ethnically and religiously set apart from the lower class. So, it was the progressives who sought to turn a police occupation into a police profession free of ward-boss influence. They called for police to be trained and be committed to public service. Moreover, the police chief should

have tenure, the ranks be highly centralized and the officers hired and promoted through rules promulgated by civil service.

The desire to professionalize the police appears to live in the hearts of police administrators. Managerial efficiency measured through the suppression of crime by exercising control over the police rank and file was the professional style that emerged from the late nineteenth century. Since then a number of reforms have taken place including the obligation to train and educate its members, a commitment to the ideals of public service, the creation of a body of scientific knowledge, and careerism. Some argue that police professionalism is truly still a dream. The adversary relationship that the police have with public and the tendency to organize in a military fashion might serve to severely inhibit the growth of professionalism. Walker writes in his epilogue (1977: 174) that in order for real change to take place the enormous powers of the police “demand strict control and uniformity of procedures.” However, Uchida (1997:32) sees undesirable consequences of the professional strict control and uniformity model. First, the professional model created a police subculture, where police officers became alienated from police administrators. Secondly, relationships between the police and the public suffered. Modern technology and the employment of the patrol car removed the police officer from direct citizen contact.

Ignoring the philosophical differences surrounding the consequences of the professional police movement, organized groups comprised of several police executives formed the Commission on Accreditation for Law Enforcement Agencies (CALEA). By 1981 members of CALEA developed and agreed upon a number of standards (over 400) that were designed to define, guide and control how police agencies should conduct

business. Accreditation standards also set minimum qualifications standards and specify selection criteria (Baker 1995).

The process where institutions develop well defined and agreed upon uniform standards is well established in higher education, hospitals, laboratories and many industries. Regardless of the profession, the goals of accreditation remain the same. They include the articulation of standards, quality control of organizational functions, a self-assessment of current policies and procedures, a review of operating practices by a team of peers, and the acceptance of professional and ethical principles in the performance of duties. History tells us that law enforcement reformers have been working toward accreditation for police departments since the early 1960s. Concerns for uniformity of the police were evident in the Warren Court decisions as well as the President's Commission reports on Law Enforcement, the Causes and Prevention of Violence, and the Commission on Civil Disorders. Moreover, police leadership called for professionalism of the police by institutionalizing control and limiting liability.

Carter and Sapp (1994) set out to gather baseline data on CALEA accredited law enforcement agencies. The research employed was the same as a previous study commissioned by the Police Executive Research Forum where every police department in the country serving over 50,000 people was included in a survey. This strategy offers inclusion of eighty percent of all United States law enforcement agencies. At the time of the survey 275 agencies were accredited by CALEA. Carter and Sapp found that the accredited agencies reported modernization of police and services. Moreover, the respondents reported the establishment of a benchmark for evaluation and a higher status in the law enforcement and local community. Fewer agencies reported higher morale or

higher budgets. Carter and Sapp conclude by writing that accreditation needs to prove itself and evidence needs to be collected in order to demonstrate the cost effectiveness of accreditation. But, the authors admit that accreditation appears to serve as a positive signpost, giving direction for organizational needs and accountability.

Baker (1995) wanted to measure the impact of law enforcement accreditation on those agencies that changed their hiring practices, raised their education standards and improved testing techniques for promotion. These changes in policy came about as a result of the accreditation process. The expectation was that upgrading these policies would improve the level of police professionalism in the affected communities. Baker found the differences between his accredited group and non-accredited group to be “slight” on the hiring methods variables. On the education variable, Baker found the differences to be not significant. The third group of variables studied, promotional procedures, Baker found, were also not significantly different. Baker concludes his study by writing, “Police are moving toward professionalism and accreditation is having some positive impact albeit small and not statistically significant” (Baker 1995 p. 134).

McCabe and Fajardo (2001) employed secondary data to make statistical comparisons between accredited law enforcement agencies and non-accredited agencies. Seventeen variables were used to compare the two groups in this national study. The variables were grouped as, agency characteristics, officer characteristics, policies and specialized operating units. The research revealed that statistical significance was found between the groups on field training hours, minimum education requirements, existing policy on drug testing, the operation of a special drug unit and the operation of a special

child abuse unit. On the eleven other variables measured they found no significance between the groups, including the variable “positive support for accreditation.”

The authors recommend longitudinal (impact) studies that consider changes over time in the accredited agencies.

Ginakis (1992) examined performance appraisal practices in Florida. He examined one hundred and sixteen law enforcement agencies while focusing on performance appraisals for patrolmen. He reviewed the purpose, the type and the categories of the agency’s rating systems. Ginakis found significant differences in those agencies possessing accreditation on the performance appraisal systems. Accredited agencies had better articulation of performance appraisal goals and more training on the use of the appraisal instrument. A discussion followed about the utility of performance rating systems which was insightful. Nevertheless, it was clear that the accredited agencies had better articulation of these devices than the non-accredited.

However, some authors, Thibault, Lynch and McBride (1998) and Bennentt and Hess (1996) agree that accreditation expectations may be too stringent for smaller law enforcement agencies. For a national accreditation CALEA expects adherence to over seven hundred standards. Therefore, states have begun developing their own accreditation processes. Colorado, New York, Washington, Idaho, Kentucky, California, New Hampshire and Pennsylvania (and probably many more) have all started their own state-specific accreditation procedures.

In conclusion, there seems to be two themes in the scant police accreditation literature. The first theme is the lack of assessment and impact studies on the benefits of

agency accreditation. The second theme enumerates some of the possible benefits of the process. The benefits include the provision of direction and accountability, an improvement of the hiring process (resulting in a more suited officer candidate), better and more frequent training, and the presence of specialized crime units.

The Pennsylvania Accreditation program

Recently, the Pennsylvania Chiefs of Police Association developed a voluntary statewide accreditation program for Pennsylvania police departments. The Pennsylvania accreditation mandate, as specified by the Pennsylvania Law Enforcement Accreditation Commission (PLEAC), requires the development of a comprehensive set of professional standards. These standards include sample policies on use of force, evidence handling, pursuits, internal affairs and many others. Police departments adopting these standards should see stronger and more credible defenses against lawsuits, significant insurance premium reductions, improvements in morale and esprit de corps, evidence of a commitment to professional law enforcement, and improvements in efficiency and effectiveness of operations. At this writing, three Pennsylvania police agencies have passed the accreditation process and are deemed “accredited” by the PLEAC. They are the Pennsylvania State Police, the Abington Township Police Department and the Derry Township Police Department.

The Evaluation of The Pennsylvania Police Accreditation Program : An overview

This multi-faceted evaluation considers the impact of the police accreditation process on police performance, police-community relations, changes in public perceptions and other challenges to ordinary police procedures. This five-stage program evaluation employs a quasi-experimental design where performance indicators within

the newly accredited police agencies are compared with comparison municipalities and jurisdictions. First, the participating police departments are studied as to the level of challenges created by the accreditation process. Content analysis is used to compare the process of altering police policy to an “accredited level.” Second, police chiefs throughout the state of Pennsylvania are queried as to their degree of reluctance to sign up and pursue the accreditation program. Third, the involved communities will participate in a citizen-satisfaction survey where attitudes toward the police will be measured. Fourth, the police officers in the accredited agencies along with those in the comparison agencies will participate in a job-satisfaction survey. Finally, the impact on crime trends, prior to the accreditation intervention is compared with times series activity after the intervention in both the program sites as well as the comparison sites.

In Chapter 2 a two-pronged approach was used to assess the degree of difficulty involved in accreditation. Police chiefs and support personnel were interviewed on site in order to qualitatively capture the nuances involved in the policy changes required by the accreditation. Secondly, a content analysis was used to assess the extent to which former policies corresponded to the newly adopted policies. These changes were cataloged and arraigned in an easy-to-read format. The objective of this chapter is to demystify the accreditation process for police commanders.

In Chapter 3, the results of a multi-jurisdictional police chief survey are presented. Seven hundred and fifty police chiefs in Pennsylvania were mailed anonymous self-addressed questionnaires. These questionnaires were designed to capture the police chiefs’ attitudes toward agency accreditation. A number of the police chiefs responded

that they believed the process was too time consuming or too expensive. Many police chiefs also reported that they have never received any information about accreditation.

It is the thinking of the police chiefs who developed the accreditation concept that police officers working in a more professional department (i.e. an accredited agency) would be happier and more satisfied on the job than those officers working in a non-accredited one. To that end, Chapter 4 illuminates the results of job-satisfaction surveys that were administered to each of the participating police agencies and their corresponding comparison group.

Randomly selected citizens in six jurisdictions responded to a community-police satisfaction survey. Over four thousand questionnaires were mailed to residents of each of the program communities and their corresponding comparison group. The results of these surveys are presented in Chapter 5. Over the past three decades a substantial number of studies have addressed citizen satisfaction with police. Thus, three models of satisfaction surveys evolved; the citizen's experience with the police, the quality of life and the neighborhood context. The questionnaires developed for this research incorporated critical components of all three types of research designs.

In Chapter 6 interrupted time series analysis is used to measure the impact of the accreditation intervention on the municipalities involved to date. This type of analysis was designed to measure the impact of an event (the accreditation) on the series (crime data). For each municipality Part 1 and part 2 crimes were analyzed over time with the objective of measuring the impact at time of accreditation.

The final chapter in this monograph contains a summary of findings along with a compilation of responses from each municipality's stake holder.

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Chapter Two: The Police Accreditation Process

Abstract: The goal of the process analysis component of the Pennsylvania Police Accreditation Evaluation was to provide an interpretation and demystification of the accreditation process utilizing quantitative and qualitative data collection methods. Content analysis was utilized to examine the differences between the old, pre-accreditation standards, compared to the new accreditation policies and standards. Systematic qualitative text analyses allowed for a detailed accounting of differences ranging from no change at all to major modifications and overall change in policies.

Comparative data gleaned from the policy/procedure manuals were aggregated from the three research sites (Derry Township, Abington Township, and the Pennsylvania State Police) in order to provide insight as to the scope of changes and their probable effects on law enforcement as a function of Pennsylvania police department accreditation. Two of the three sites obtained international accreditation from the Commission on Accreditation for Law Enforcement Agencies (CALEA) prior to obtaining the Pennsylvania state accreditation while one department, Abington Township police, pursued the state accreditation before CALEA. Therefore, Abington Township was the first police department in the state of Pennsylvania to receive state accreditation, yet Derry Township and the State Police experienced a smoother transition to the state accreditation due to its similarity to CALEA. The most obvious difference between the state and international accreditation lies in the number of articulated standards. CALEA operates on more than 400 standards while the state standards number approximately 109.

Evaluation Design

Site visits were performed and interviews were conducted with key personnel involved in the accreditation at the program sites. In spite of what clearly included many hundreds of man hours to design and implement, the people interviewed professed positive support for the accreditation process and the on-going record keeping involved in maintaining compliance. Standards have to be individually verified and copious records must be kept for examination by compliance evaluators in order to maintain departmental accreditation. For example, one police department had a huge bulletin board with color coded state and inter-national policies and their verification progress displayed in order to allow all personnel to view the process as well as the record keeping procedures. This same department underwent many major physical plant renovations in order to meet prisoner detention standards. Interviewees consistently cited reasons for the benefits of accreditation as linking to “professionalism,” “reduced threat of lawsuits,” and “doing the right thing.” In fact, the overall consensus was that citizens should receive the same treatment, regarding a police response to an encounter, throughout the state and that accreditation provides the standardization to meet that end. One major difference between the pre- and post- accreditation effects was reduced officer discretion. Whereas the old standards and policies leave much to officer interpretation, the new ones leave almost nothing to chance.

Content analysis typically entails a quantitative data collection method, usually a word frequency count. For example counting how many times a word appears in various newspaper articles. The analysis then can be used for determining patterns or trends. For this research the changes between the old and the new policies are counted and

interpreted the amount of difference between the old and new policies by categorizing them as “little or no change,” “moderate change,” and “major change.” The results show equal groupings by category, approximately one-third of the policies fell into each of the three categories.

Systematic qualitative text analysis was utilized to examine the nature of the difference in specific policies between the pre- and post- accreditation standards. It allowed the researchers to compress many words of text into fewer, and more succinct, content categories. The qualitative-interpretive steps of analysis allowed for the examination to take place within the philosophy of more typical content analysis while utilizing themes and main ideas for purposes of comparison. The reliability of qualitative data collection is grounded within the consistency of the interpretation process. Reliability and validity both lie within the context of one researcher collecting, interpreting, and summarizing the data. This provides high levels of consistency, but no corroborating or comparative measurement method. For purposes of this research, 29 procedure headings were identified and information was extrapolated from massive binders containing old memos, directives, and policies. These aggregate data sets are represented all three research sites. (See Appendix A)

Results

The category, little or no procedural changes between original and new procedures are presented first. Selective Enforcement Activities (policy #5) records slightly different wording in the new procedure but it essentially stays the same. Traffic Ancillary Services (policy #9) involves numerous highway hazards with little change other than the existence of a new tool called the Traffic Work Request pertaining to a

damaged or missing sign. The procedure for issuing Warrants (policy #12) is essentially the same in the new as the old with the exception of recording procedures utilizing RMS (Records Management System). The Canine Unit Operations (policy #14) are for all intent and purposes the same. Minor changes in how to handle a bite and a few name changes are all that differ between the old and the new. Most sections are exactly the same. Intelligence Officer (policy #16) procedures are essentially the same with inclusion of RMS and compliance with Act 207. Hostage/Barricade Situations (policy #17) procedures are essentially unchanged. On-call Detective (policy #20) procedures are changed in word but not substance. Body Armor (policy #22) procedures and policies remain the same. The CLEAN system (policy #28) deals with data collection/recording standards as set forth by state and federal authorities. The changes between the original and new concern technological advancements in record keeping procedures and provide more detailed instructions. The overall intent to comply with currently mandated record keeping requirements has not, in spirit, changed.

Secondly, the moderate changes between original and new procedures were analyzed. Purchasing and Fiscal Management (policy #3) procedures underwent moderate changes. The Chief of Police was identified as responsible for the budgetary and purchasing aspects of the department in the new guidelines however he still reports to the Township Manager. Repair of Police Vehicles and Agency Owned Property (policy #4) shows moderate changes in procedures, primarily in the form of clear definitions as to what is to be declared as fixed assets. Fire, Police, and Traffic Signals/Signs (policy #8) contains moderate changes consisting primarily of merging the old orders together. The new policy provides for the safety of the officer whereas the original does not.

Reports and Report Forms (policy #10) expands on the old guidelines with the new ones. Included is the utilization of the township's RMS. Domestic Violence (policy #11) procedures contain moderate changes primarily in the way of expanding upon the original responsibilities of the responding officer. Victims Rights (policy #13) procedures change moderately with the additional provision of a 24-hour phone line for victims to call for information and referrals. There includes a minor name change of the form, from Rights and Services to Rights and Services Available to Victims of Crime in Pennsylvania. In addition, the victim is assigned a contact person. Civilian Position Staffing (policy #15) deals with personnel procedures for non-sworn officers within the police department employ. The original procedure details minimum qualifications and the new procedure strictly deals with communications specialists, secretaries, and community service officers. Emergency Mobilization (policy #19) appears to be comparable to the new Emergency Mobilization of Departmental Personnel procedures. The new procedure deals with communications, alert stages, primary and alternate assembly areas, and equipment distribution. The old Crisis Response Team was replaced by the Emergency Management Agency. Transport of Prisoners (policy #23) contains verbiage changes in the new procedures but the differences are moderate. The procedural changes are in the instructions sections and communications to the dispatcher (i.e., the new requires reporting mileage and destinations to the dispatcher). New and Media Relationship (policy #26) procedures are lengthy and highly detailed in both the old and new procedural guidelines. The changes are moderate in nature with more careful and detailed instructions concerning communicating with the media in the new procedures.

Finally, major or extensive changes between original and new procedures

are examined. The Holding Cell (policy #1) procedure incorporated many new standards and corresponding policies and, for one site, included major physical facility renovations. The new standards include nine General Orders categories concerning the establishment of guidelines for the temporary detention of detainees in accordance with prevailing state rules and codes. The procedure for Confiscation of Drugs and Drug Paraphernalia (policy #2) included extensive new and amended provisions relative to Vice, Drugs, and Organized Crime. There are unclear policies concerning the issues of handling, recording, witnessing, safekeeping, and chain of custody for confiscated drugs. The policies for Enforcement Procedures and Traffic Direction and Control include major changes since no equivalent was found in the old records. Mass Arrests in Civil and other Disturbances (policy #18) procedures are all new as no equivalent was found in the original documentation. Control and Disposition of Property (policy #21) procedures underwent major changes including utilization of RMS. The new procedures provide for five types, rather than four, of property including: evidence property, recovered property, found property, abandoned property, and property acquired through the civil process function. Notification of the County Coroner (policy #24) procedures changed considerably with much more instruction and requirements concerning both the investigation and notification process. Police Vehicle Pursuit (policy #25) procedures are lengthy and complex for both the old and the new standards. The definition for motor vehicle pursuit is essentially the same with a few additions. The new procedures include the provision of a canine unit. The dispatcher, shift supervisor, and primary/secondary unit procedures are more detailed in the new procedures. Caravanning and paralleling procedures remain similar. Shooting at vehicles was prohibited in the old but allowed in

accordance with current use of force policies in the new. Road blocks were “prohibited” in the old standards but only “discouraged” in the new. The term “ramming” has been changed to “legal intervention.” Tire deflation devices are only included in the new procedures. Jurisdictional issues have been addressed differently in the new procedures as have “responding to routine and emergency calls.” Essentially, code 3 has been changed to priority one and states that Title 75: Section 3105 governs responding to an emergency call. Maximum response is expected from all available staff and shift supervisors can change responding levels. Fifteen priority one responses are designated. New procedures also include the addition of “stop sticks” and provides for reports written about pursuits which the old procedures do not. The Disciplinary System (policy #27) is completely revised. Whereas the original is an extremely broad overview of the disciplinary process, the new covers all the facets of the disciplinary system. It includes such additions as dress codes and sexual harassment procedures. Communications (policy #29) procedures have also been changed. In addition, the accreditation standard compliance responsibilities are housed within the new procedures. Many more

Discussion of Results

The motivations for state accreditation differed slightly amongst the research sites. The primary motivation of the one department was to obtain the CALEA or international accreditation which the other two sites already had. However, the philosophical reasoning behind these initiatives was the same. The belief was that accreditation made for a “better” law enforcement organization, one that could withstand outside scrutiny and be recognized as “professional.” All departments were self-insured so reduced insurance premium costs in that regard were irrelevant, but, all believed that

the potential for lawsuits, however, was reduced by accreditation. The responses to specific incidents may or may not have changed with accreditation, but now everyone knows the appropriate handling of the situation and documentation and verification exists to corroborate that the standard is being followed. Departments see these standards as a form of “proof” against discrimination threats because written reports now document that specific policies and guidelines are being followed. Although all research sites expressed initial resistance to change, in particular from the line officers, the administrative endorsement of state accreditation remained unwavering.

Conclusions and Recommendations

State accreditation appears to be superior to the prior practice in that the policies and procedures are better organized and explained to the officers along with a clearly stated means of handling most of the situations encountered by law enforcement. It was not possible to determine from this segment of the overall research project the extent to which this accreditation process will effect the individual research sites over time. However, the goal of consistency and continuity between and among police departments within the state of Pennsylvania appeared to be met by accreditation.

Chapter Three: Pennsylvania Police Chief Attitudes Toward State Accreditation

Abstract: Two hundred and fifty-three police chiefs in Pennsylvania responded to a stamped self-addressed anonymous survey designed to ascertain why they are not currently pursuing police accreditation. At the time of the mailing, only three departments had been accredited by the state commission. The Pennsylvania Police Accreditation program is a state-level process created by the chiefs of police association. Its tenets require a review and revision of department policy manuals in order to bring them into an agreed upon standard of acceptance. Police accreditation is designed to standardize police policy in order to reduce law suits against municipalities. The survey results indicate that some police chiefs felt the process was too expensive or that they had not received enough information about the program on which to base a decision.

The study

The purpose of this study was to ascertain the degree to which police chiefs in Pennsylvania were interested in pursuing accreditation. Moreover, if the police chiefs were not interested in accreditation this study sought to find out why. Seven hundred and fifty police chiefs were mailed an anonymous questionnaire designed to capture the aforementioned information. It was believed that the police chiefs in Pennsylvania simply did not have any information about the program. The list of police chiefs' names and addresses was gleaned from the Pennsylvania State Police. Every municipal police chief in Pennsylvania was included in the mailing. Two hundred and fifty three police chiefs (34%) responded to the study. All of them were male. The chiefs reported managing police departments with sworn personnel ranging between 1 and 242 with the average number of officers 13.6. Ninety percent of the departments have 27 officers or less. The police chiefs serve communities with populations ranging between 600 and 106,000 with the average population served as 8,900. Eighty four percent of the police chiefs reported serving either rural or suburban communities. Ninety percent indicated that their departments provide general police services. The average years served as police chief is 9 and the average years on the job as a police officer is 24. Thirty percent

of the chiefs reported having at least a four-year college degree. Some had advanced degrees. See Table 3.1 for descriptive data.

Table 3.1 Descriptive data

Variable	Range	Mean
Sworn personnel	1 – 242	13.6
Population	600-106,000	8,900
Community type:		
Rural – 35%		
Suburban – 47%		
Urban – 16%		
Major police function:		
General – 95%		
Years as a police officer	2 - 40	24
Years as police chief	.5 – 31	9
Education: High school – 14% Some college- 54% Bachelors – 21% Masters - 9%		

On the reverse side of the questionnaire the respondents were asked to reply to the following: “Generally speaking our police department has decided not to participate in the Law Enforcement Accreditation program because.” Thirty-one percent left the answer blank. Twenty-one percent, or 53 respondents, responded that they are in the process of being accredited or were definitely interested. Fourteen percent, or 35 respondents wrote that they lacked information about the program. A few wrote that this was the first time they heard of it. Nine percent, or 22 respondents, wrote that the process is too time consuming. Eight percent, or 20 respondents, reported that there was not enough return for the effort and another 8 percent wrote that they lacked the funds. Six percent, or 14 respondents, wrote that they didn’t have the manpower and 6 percent reported that they lacked political support. Five percent, or 12 respondents wrote that they were simply too small and a few wrote that they had union opposition or there was

really no reason to bother as attorneys are too aggressive and accreditation is not strong enough to prevent law suits. See Table 3.2 for response summaries.

Table 3.2 Narrative responses

RESPONSE	N=253	Percent
Narrative left blank	78	31%
Are interested in applying or have applied	53	21%
Lack information	35	14%
Too time consuming	22	9%
No return for the effort	20	8%
Lack need funds	19	8%
Don't have the necessary manpower	14	6%
Lack political support	14	6%
We are too small or we are part time	12	5%
We have union opposition	1	
Attorneys are too aggressive	1	

Fifteen questions were asked of the police chiefs that called for their opinion as to reasons why, or why not, they support, or do not support accreditation. These questions were arranged in a common-response format as a Likert Scale where 1= disagree and 5= agree. The participating police chiefs were in most agreement (mean = 4.05) that the accreditation process improves professionalism. This was followed by: improves operational efficiency (mean=3.60), reduces insurance costs (mean=3.45), reduces operational costs (mean=3.45), improves community relations (mean=3.40), improves officer safety (mean= 3.35), improves relationships with other agencies (mean = 3.22), and improves job satisfaction (mean=3.22). The responding police chiefs disagreed most with the statement I don't have rank & file support (mean=2.19). This was followed by: I don't have political support (mean=2.56), I believe the process is too expensive (mean= 2.68), my superiors believe that the process is too expensive (mean=2.91), goals have not been explained to me (mean=2.93), and creates oversight (mean=2.94). So, the highest

agreement came from accreditation will improve professionalism and the highest disagreement came from I don't have rank & file support. See Table 3.3

Table 3.3 Responses to Likert- scaled questions

Variable	Mean
I believe that the process is too expensive	2.68
My superiors believe that the process is too expensive	2.91
Goals have not been explained to me	2.93
I don't have political support	2.56
I don't have rank & file support	2.19
Reduces insurance costs	3.45
Reduces operational costs	3.45
Improves criminal investigations	3.11
Improves officer safety	3.35
Improves community relations	3.40
Improves relationships with other agencies	3.22
Helps to professionalize the police	4.05
Improves operational efficiency	3.60
Improves job satisfaction	3.22
Creates state oversight	2.94

The fifteen dependent variables (taken from the scaled responses) are next regressed with the independent variables, number of officers, population, municipality type, function of the police department, years of experience, years as chief and education level. See Table 3.4. The variable number of officers is significant with understanding goals ($b = -.195$), political support ($b = -.219$), improves relationships with other agencies ($b = .257$), increases job satisfaction ($b = -.267$) and creates state oversight ($b = -.183$). In other words, as the size of the department increases the more likely the chief is to understand the program's goals, the more likely he is to feel supported from the political body, the more likely he feels that the program will increase job satisfaction and that he will feel less that the state will become an oversight board.

The variable population is significant with understanding accreditation goals ($b = -.206$), have police rank & file support ($b = .260$), job satisfaction ($b = -.261$) and state oversight ($b = -.190$). In other words, as the population of the municipality increases the

more likely police chiefs in these municipalities understand the program's goals, the more likely they report feeling support from the rank & file, the more likely they believe job satisfaction will increase and the less likely they feel that the state will become an oversight board.

The variables experience and tenure are significant with understanding program's goals ($b = -.251$), too expensive ($b = .318$) and job satisfaction ($b = .369$). The police chiefs with less experience were more likely to report not understanding the program's goals. The chiefs with more experience (recall from Table 3.1 that some chiefs had well over thirty years on the job) were more likely to believe that the political body feels that the costs of accreditation are too high but they also are more likely to believe that the program will improve job satisfaction.

The variable education was significant with the variables Politicians believe that the process is too expensive ($b = -.343$), the goals of the program were not explained to me ($b = -.206$), the program improves officers' safety ($b = -.365$) and creates a state oversight board ($b = -.192$). Thus, the lower the level of the police chief's education the more likely he is to agree that the accreditation process is too expensive in the minds of the politicians, the more likely he is to agree that the program's goals were not adequately explained to him and the more likely he is to believe that the program will result in more state oversight. Moreover, the less education the chief has the more likely he is to report that the accreditation process improves officers' safety.

From the regression analysis we learned that there are significant differences on how Pennsylvania police chiefs view the accreditation program. The police chiefs lacking educational attainment reported differences in goal understanding and level of

political support. More importantly, however, is the finding that larger police departments appear to be better suited for accreditation. Recall that ninety percent of the police chiefs in this study work in small police departments with 27 officers or less.

Table 3.4 Regression results

Independent variable	Dependent variables				
	No. Officers	Popul.	Exper.	Tenure	Edu.
Believes its too expensive	-.085	-.055	-.018	.318*	.195
Politicians say its too expensive	-.029	-.104	.063	-.125	.343*
Goals were explained	-.195*	-.206*	-.251*	-.046	-.206*
Has political support	-.219*	-.155	-.063	.202	.080
Has rank & file support	.296	.260*	-.068	.062	.048
Reduce insurance costs	-.128	-.139	-.010	.039	.073
Reduce operations costs	-.110	.077	-.027	.008	-.118
Improves investigations	.046	.020	-.059	.035	.181
Improves safety	-.062	-.056	-.234	-.446	-.365*
Improves community relations	.151	.203	.242	.203	-.097
Improves agency relationships	.257*	.221	-.140	-.171	-.188
Helps to professionalize	.119	-.107	-.012	.007	.099
Improves efficiency	-.071	-.042	.082	.037	.213
Improves job satisfaction	-.267*	-.267	.004	.369*	.010
Creates state oversight	-.183*	-.190	.069	-.080	-.192*
R	.518	.518	.332	.428	.435
R Squared	.268	.268	.110	.183	.205

* P= .05

Discussion

Of the important issues regarding accreditation for Pennsylvania police chiefs, lack of information leads the list of reasons not to consider accreditation followed by the process is too time consuming, there is no return for the effort, lack of funding, lack of manpower, lack of political support and the perception that they are too small.

Collectively, the police chiefs that responded to the survey agreed that the process helped to professionalize the police, and reduced insurance and operational costs. A few misunderstandings, probably due to lack of information, are evident as a result of this

research. Disagreements as to the benefits of accreditation were seen between police chiefs possessing higher education and those that did not. Moreover, the size of the department was a predictor of negative reactions by police chiefs towards the benefits proposed by accreditation. Clearly, the results of this survey settle the debate that the police chiefs are not receiving information about the process, the mechanics, or the benefits of accreditation, because they are not.

Chapter Four: Job Satisfaction

Abstract: The designers of the Pennsylvania Accreditation Plan earmarked job satisfaction as a desired behavioral objective of police officers. It is believed that police officers working under conditions of clear operational objectives will be more satisfied with their positions than those working under the ambiguity of a non accredited police department. The three program sites were compared with three comparison sites as to the degree of police officer job satisfaction, job esteem and job related depression. Officers and employees responded to a self addressed stamped questionnaires designed to measure job satisfaction.

Job satisfaction has long been recognized in private industry as a prerequisite for successful job performance as low levels of satisfaction affect absenteeism, productivity, and employee turnover (Dantzker 1994). Evidence exists which shows that absenteeism, burn-out, alcoholism, substance abuse, and suicide can be related to stress for police officers. Further, poor job satisfaction for police officers results in a poorer quality of law enforcement service and raises tension between the police and the public. Buzawa, Austin, and Bannon (1994) linked cynicism with low levels of job satisfaction and poor quality of interactions with the public. Improving job satisfaction may have positive benefits if reducing stress. Generally, the literature on police job satisfaction suggests that the nature of the job, including the requirements inherent in police work, coupled with the personality and professional aspirations of the individual officer, contribute toward overall levels of job satisfaction. Nevertheless, the research on police officer job satisfaction is relatively scarce.

Zhao, Thurman, and He (1999) suggest that the importance of studying job satisfaction among police officers is related to the changing expectation of police management styles. Policing, in general, is moving toward a more autonomous model whereby officers are given greater levels of decision-making authority. Job satisfaction among police officers, they found, was related to perceptions of the importance of their

work, the recognition they received for their work, and ability to perform their duties as capable employees. These factors were positively correlated to feelings by police officers enjoying their work. Thus, as police management styles are forced to adapt to changing public demands for more police accountability, job satisfaction in law enforcement becomes an important operational concern. Dantzker (1992) defined job satisfaction as an individual's attitude (positive or negative) towards his or her job.

A survey developed to measure levels of job satisfaction was mailed to every police officer in Abington Township, Cheltenham Township, (comparison group) Derry Township, Susquehanna Township (comparison group) and a sample of State Police sworn and un-sworn personnel. The research design was modeled after Quinn and Shepard's well-know scale of job satisfaction. The survey instrument contained indicators of general job satisfaction, job-related depression, and job-related self-esteem. This instrument was originally developed to measure the nature and quality of work in the United States. The Quinn and Shepard instrument was selected for this research because its index on each job satisfaction variable has been tested to have high internal consistency and reliability. The instrument was replicated on a national level for three consecutive years, supplying researchers with a tested valid instrument.

According to the responses of the police officers in Abington and Cheltenham Townships (See Table 4.1) these police departments are comprised of mostly white males, with Abington having slightly more women on the force (13 percent to 7 percent). The Cheltenham police force has slightly older, more experienced officers than Abington, with an average age of 42 with 18 years on the job. Abington officers reported an average age of 35 with 10 years experience. The Cheltenham Police Department also reported to

be more educated with 65 percent holding a bachelors or masters degree. Abington police reported that 39 percent had a bachelors or masters degree.

Table 4.1 Descriptive variables Abington and Cheltenham

Variable	Abington		Cheltenham	
	N	%	N	%
Age				
Average	35	-	42	-
Range	24-54	-	26-56	-
Sex				
Female	4	13	2	7
Male	27	87	26	93
Race				
White	29	93	21	96
Black	1	3	-	4
Other	-	-	1	-
No response	-	-	-	-
Education				
High School	15	48	5	18
Associates	4	13	5	18
Bachelors	10	32	15	54
Masters	2	7	3	11
Higher than masters	-	-	-	-
No response	-	-	-	-
Hours worked last week				
Average	44	-	42	-
Range	24-68	-	0-62	-
Supervisor's sex				
Male	24	77	21	93
Female	1	3	1	4
No response	-	-	-	-
Years as a police officer				
Average	12	-	18	-
Range	1-25	-	1-33	-

In Derry and Susquehanna Townships the police are very similar in terms of gender with both jurisdictions reporting having 3 female officers and with Susquehanna reporting 7 percent (2) black officers and Derry none (See Table 4.2). The Derry officers served a bit longer 12.7 years to Susquehanna's 7.5. The officers in Derry reported to possess a higher percentage holding bachelors and masters degrees (52 percent to 24 in Susquehanna).

Table 4.2 Descriptive variables Derry and Susquehanna

Variable	Derry		Susquehanna	
	N	%	N	%
Age				
Average	35	-	34	-
Range	25-57	-	26-47	-
Sex				
Female	3	12	3	10
Male	21	84	26	90
Race				
White	24	96	26	90
Black	-	-	2	7
Other	1	4	-	-
No response	-	-	-	-
Education				
High School	9	36	12	41
Associates	3	12	10	35
Bachelors	12	48	7	24
Masters	1	4	-	-
Hours worked last week				
Average	43	-	44	-
Range	24-88	-	40-64	-
Supervisor's sex				
Male	25	100	28	97
Female	-	-	1	3
No response	-	-	-	-
Years as a police officer				
Average	12.7	-	7.5	-
Range	1-35	-	1-23	-

One hundred and thirteen Pennsylvania State Police officers responded to the job satisfaction questionnaire. The average age of respondents is 43, ninety nine percent are white, fifty five percent are female, and 46 percent reported possessing a bachelors or higher college degree. The respondents reported an average of 17 years on the job. (See Table 4.3.)

Table 4.3 Descriptive Variables Penn. State Police

Variable	Pennsylvania State Police	
	N	%
Age		
Average	43	
Range	22-66	
Sex		
Female	62	55
Male	51	45
Race		
White	112	99
Black	1	1
Other	-	-
No response	-	-
Education		
High School	56	50
Associates	17	15
Bachelors	27	24
Masters	4	3
Higher than masters	5	4
No response	-	-
Hours worked last week		
Average	38	-
Range	0-56	-
Supervisor's sex		
Male	80	71
Female	29	26
No response	-	-
Years as a police officer		
Average	17	-
Range	2-32	-

Police officers participating in this study responded to three scales designed to measure job-related depression, general job-satisfaction and job-related self-esteem. The officers also responded to 8 questions (independent variables). The average scores along with their associated standard deviation appear in the appendix at the end of this chapter in Appendix B. Generally speaking, scanning over the average scores will reveal to the reader the degree to which officers answered the questions in these police departments. In the aggregate, the police officers' scores in this study do not show any areas of major concern. However, when the average aggregated scores are compared (employing a t-test) we see significant differences between police departments on a number of variables. These significant differences are displayed in Tables 4.4, 4.5, and 4.6. In Table 4.4 the significant differences between the responses recorded by the police officers in Abington

and Cheltenham Townships are displayed. The police departments differ in terms of age of officers, education, marital status and years on the job. As previously stated, the Cheltenham police officers are older, have more police experience and are more educated and tend to be married. The Abington officers felt as though the job required more physical effort, would pick policing as a career if they had to do it over again and recommend the job to a friend. The Abington officers were significantly less likely to report feeling downhearted and blue. On the face of these differences it appears that the Abington officers are happier at work on a few indicators.

This data will be addressed again later in this chapter.

Table 4.4 Significant Differences (Abington & Cheltenham)*

	Abington		Cheltenham		t
	Mean	S.D.	Mean	S.D.	
Age	35.7	7.48	42.00	11.23	-2.92
Education	1.97	1.05	2.57	.92	-2.34
Marital Status	1.81	1.25	1.25	.70	2.08
Years on the job	10.87	8.43	18.79	8.53	-3.19
Job requires physical effort	2.57	.73	2.14	.93	1.94
Would you select a different job	1.34	.72	1.75	.89	-1.89
Recommend job to a friend	1.40	.67	1.78	.88	-1.89
Sometimes I feel blue	3.16	.95	2.71	.76	1.99

*significant at .05

In Table 4.5 the significant differences between Derry and Susquehanna Township Police Department are displayed. The Derry officers' responses were significant on the degree to which they felt that the police department supplied them with the right equipment to do the job. Moreover, the officers in Derry responded that they

felt that supervision was not adequately sharing information, communicating with officers and are not receptive to new ideas. The analysis of the data did not reveal any significant differences on the job satisfaction scales. Therefore, these two departments did not have significant differences on job satisfaction. However, there seem to be issues regarding communications, receptiveness and exchange of needed information between supervisors and officers in Derry that do not exist in Susquehanna.

Table 4.5 Significant Differences (Derry v Susquehanna)

	Derry		Susquehanna		t.
	Mean	S.D.	Mean	S.D.	
The department provides me with the right equipment to successfully perform my job.	3.76	.72	4.50	.167	-3.32
Exchange of information within the department is adequate.	3.48	.15	4.00	1.02	-2.08
My current position involves physical danger	1.16	.47	1.00	.00	1.82
Supervisors are receptive to my ideas and suggestions.	3.56	.96	4.18	.98	-2.31
My supervisor communicates information to me.	4.12	.88	4.54	.64	-1.93

*Significant at .05

In Table 4.6 the significant differences between the Pennsylvania State Police and the civilian State Police employees are displayed. Civilians were included in the study at the request of the State Police command staff. Naturally, and not surprisingly, a number of significant differences exist between sworn police and civilian personnel such as the specificity of training and physical effort required to do the job. Perhaps the most telling statistic is the significant t score on the “felt discriminated against on the basis of my sex” variable. The state police officers responded significantly higher than their civilian counterparts on this indicator. This finding can be considered somewhat spurious

as we are comparing police troopers to civilians. However, the issue of sexual discrimination should be examined further.

Table 4.6 Significant Differences (Troopers & Civilians)*

	Troopers		Civilians		t
	Mean	S.D.	Mean	S.D.	
Gender	1.09	.33	1.55	.50	7.41
Age	37	8.86	43	1.11	4.14
Race	1.14	.59	1.01	.09	-2.26
Hours worked last week	43	7.94	38	7.9	-4.77
Receptive supervisors	3.14	1.21	3.60	1.18	3.76
Years on the job	13.08	7.27	1.77	5.27	12.77
Specific training	7.30	1.71	2.68	3.29	-11.91
Requires physical effort	2.52	.94	1.54	.76	-8.18
Job involves danger	1.15	.39	1.76	.43	10.49
Work with co-workers	1.41	.52	1.19	.42	-3.24
Job has freedom	3.23	.89	2.95	.84	-2.28
Felt discriminated against	1.66	.52	1.88	.47	3.08

*Significant at .05

When each of the municipal departments in this study was analyzed we learned the “n” was too small for a successful regression analysis. Therefore, the data from the municipalities were aggregated and then the regression was completed. Admittedly, we lost the ability to compare each intervention department with its corresponding comparison group and the loss of this comparison creates a threat to validity. However, the results of this analysis are nevertheless quite useful. The Quinn-Shepard Scales for job-related depression, job-satisfaction and job-related self esteem appear below in Table 4.7 for Abington and Cheltenham in the aggregate.

For all the officers participating in this study in Abington and Cheltenham Townships a statistically significant relationship exists between race and job-satisfaction ($b = -2.78$) and number of males and job-satisfaction ($b = 2.33$). Thus, the non-white officers are reporting less job-satisfaction and the perceived number of males in each department influences job-satisfaction. The officers were asked how many males served their police department. So, this is more a perception than a fact as the responses varied widely by individual officer.

The job-related depression scale was significant with the following variables; sex ($b=-1.79$), race ($b=3.1$), number of females ($b=-2.85$), number of children ($b=-.49$), supervisor's gender ($b=.44$) years of service ($b=1.61$), supervising others ($b=-0.62$), years with the organization ($b=1.28$), and discriminated against ($b=-0.15$). Thus, a police officer's sex is an indicator of job-related depression, as is children at home, and supervisors' gender. Moreover, if an officer feels that they are being discriminated against, they are likely to report being depressed on the job. On the other end of the scale, being a supervisor and having many years on the job is an indicator of no job-related depression.

For job-related self-esteem sex ($b=2.30$), number of males ($b=4.30$) and supervise others ($b=.91$) are significant. So, supervisors are reporting significant levels of self-esteem as are those who perceive a higher number of males on the job. Also, males are reporting a significant level of job-related self esteem. Remember that these data are aggregated from both police departments.

Table 4.7 Regression Results Abington & Cheltenham

	Job Satisfaction			Job-Related Depression			Job -Related Self Esteem		
	b	S.E.	B	b	S.E.	B	b	S.E.	B
Sex	4.56	10.01	0.36	-19.77	8.48	-1.79*	10.29	3.9	2.3*
Age	0.28	0.166	1.09	-7.02	0.137	-0.313	8.44	0.06	0.92
Race	-24.02	11.97	-2.78*	23.8	10.223	3.1*	-6.54	4.72	-2.13
Education	0.25	0.832	0.08	-0.36	0.675	-0.13	-0.213	0.32	-0.19
Number of Females	1.12	0.538	5.13*	-0.55	0.461	-2.85*	0.39	0.21	5.00
Number of Males	0.455	0.307	2.33*	-0.2	0.266	-1.16	0.3	0.12	4.30*
Number of Children	-2.21	1.599	-3.74	-2.57	1.37	-0.49*	-0.5	0.63	-0.23
Married	0.4	1.42	0.12	-1.27	1.2	-0.433	-0.31	0.56	-0.26
Hours Worked	9.65	0.04	0.49	4.48	0.03	0.026	2.76	0.01	3.9
Union Member	-5.5	2.09	-0.76	-3.09	1.77	-0.48	-1.54	0.87	-0.6
Supervisor's Gender	-2.6	1.66	-0.47	2.19	1.3	0.44	-0.49	0.62	-0.25
Years of Service	-0.34	0.25	-1.15	0.41	0.22	1.61*	-0.14	0.1	-1.31
Tenure	0.4	0.24	1.38	-0.41	0.21	-1.61*	0.15	0.09	1.5
Training Relevance	-1.27	0.51	-0.74	-1.4	0.4	-0.09	-0.14	0.2	-0.24
Effort	2.54	0.99	0.79	-0.775	0.85	-0.27	0.42	0.42	0.37
Danger	2.48	2.12	0.35	1.74	1.84	0.284	1.27	0.89	0.51
Co-Worker	2.98	1.45	0.5	0.531	1.17	0.102	0.558	0.58	0.26
Supervise Others	1.93	1.62	0.33	-3.22	1.4	-0.62*	1.91	0.65	0.91*
Organization	7.72	0.06	0.05	0.14	0.05	1.28*	-6.6	0.02	-0.14
Freedom	-3.75	1.45	-0.75	2.36	1.25	0.53	-8.8	0.58	-0.43
Discrimination	-4.67	4.13	-0.45	-1.4	3.5	-0.15*	-0.12	1.61	-0.03
Income	1.41	0	0.1	-8.78	0	-0.7	7.9	0	0.15
Family Income	-6.45	0	-0.25	-3.08	0	-0.13	-5	0	-0.05
Township	5.71	2.82	0.91	0.27	2.45	0.05	0.937	1.12	0.42

The results from the Derry and Susquehanna Townships' regression appear below in Table 4.8. Again, because the data are aggregated comparisons between the two police departments cannot be made. Job-satisfaction was significant with accomplishments ($b=.382$) and trust in supervisor ($b=-.392$). Job-related self-esteem was also significant with accomplishments ($b=.33$) and trust in supervisor ($b=-.53$) Thus, officers who feel a sense of personal accomplishment and those who trust their supervisors report a significant feeling of job satisfaction and self-esteem. In Derry and Susquehanna job-related depression was significant with years with current police department ($b= -.92$) and supervise others ($b= -.54$). Those officers with fewer years on the job and those that did not supervise others reported job-related depression.

Table 4.8 Regression Results Derry & Susquehanna

	Job Satisfaction			Job-Related Depression			Job -Related Self Esteem		
	b	S.E.	B	b	S.E.	B	b	S.E.	B
Department	0.71	0.73	.174	-0.49	0.977	-0.1	9.47	0.12	0.16
Accredited	-0.3	0.38	-.123	0.45	0.5	0.15	3.45	0.06	0.09
Gender	1.04	0.96	.161	-1.46	1.4	-0.18	-8.47	0.16	-0.009
Age	-3.78	0.05	-.151	0.12	0.07	0.43	-1.42	0.01	-0.39
Race	0.1	1.09	.018	-0.48	1.47	-0.07	9.28	0.18	0.11
Education	-0.2	0.36	-.091	0.12	0.47	0.04	-4.65	0.06	-0.14
Proper Equipment	0.34	0.53	.147	-0.93	0.71	-0.35	2.45	0.09	0.07
Department interaction	-0.43	0.43	-.197	0.45	0.58	0.18	-9.96	0.07	-0.31
Expectations	-9.8	0.54	-.044	-0.88	0.74	-0.34	9.03	0.09	0.28
Accomplishments	-0.69	0.3	-.382*	0.54	0.4	0.23	-9.69	0.05	-0.33*
Hours worked	2.97	0.01	-.182	5.15	0.02	0.03	-4.11	0.003	-0.21
Good supervision	3.13	0.42	-.384	0.88	0.54	0.42	-9.17	0.07	-0.35
Supervisor's gender	0.12	1.8	.198	3.08	2.37	0.18	4.24	0.31	0.02
Years as officer	3.13	0.11	.122	-0.15	0.15	-0.5	-4.29	0.02	-0.11
Years with current PD	0.12	0.11	.459	-0.27	0.14	-0.92*	3.15	0.01	0.83
Specific training	-0.1	0.18	-.082	-7.5	0.24	-0.05	-3.3	0.03	-0.17
Physical effort	0.66	0.63	.235	-1.3	0.82	-0.43	-3.55	0.1	-0.08
Physical danger	-0.61	1.12	-.099	3.84	1.46	0.544*	-7.32	0.19	-0.08
Steady Work	-2.89	2.12	-.193	3.74	2.86	0.22	-0.4	0.36	-0.18
Work with co-workers	8.3	0.76	.019	-0.78	1.07	-0.15	-4.11	0.13	-0.06
Supervise others	1.2	1.05	.304	-2.56	1.4	-0.54*	0.26	0.18	0.46
Clear goals	0.68	0.61	.297	0.663	0.8	0.25	1.75	0.1	0.05
Freedom	0.44	0.59	.117	0.187	0.77	0.04	2.89	0.1	0.05
Discrimination	3.6	2.03	.240	-4.54	2.66	-0.26	0.41	0.34	0.19
Sharing Ideas	4.34	0.67	.017	-0.54	0.95	-0.18	9.41	0.11	0.26
Trust in supervisor	-1.2	0.58	-.392*	0.67	0.9	0.19	-0.23	0.1	-0.53*

Unlike the municipal departments the Pennsylvania State Police had a significant “n” to run the necessary regression with accuracy. Table 4.9 displays the regression results. Job-satisfaction is significant with accomplishments (b= -.48), physical effort (b= .01), physical danger (b=-.02) and freedom (b= -.24). Thus, troopers not feeling accomplishment are reporting lack of job satisfaction. Interestingly, those troopers who felt the job had physical effort reported significant job satisfaction. Those who reported feeling a loss of freedom and physical danger reported a statistical significance with negative job satisfaction. Job-related self-esteem had but one significant indicator. Younger troopers reported a negative significant relationship with job-related self-

esteem. Job-related depression was significant with accomplishments ($b = .42$), steady work ($b = .18$), supervise others ($b = -.19$) and sharing ideas ($b = .32$). Thus, feeling low levels of accomplishment on the job is related to depression as is not supervising others.

Table 4.9 Regression Results Pennsylvania State Police

	Job Satisfaction			Job-Related Depression			Job -Related Self Esteem		
	b	S.E.	B	b	S.E.	B	b	S.E.	B
Accreditation	-1.05	0.38	-0.2*	-0.23	0.41	-0.04*	8.57	18.94	0.05
Gender	0.37	0.59	0.06	0.79	0.65	0.12	14.62	28.95	0.07
Age	-3.44	0.02	-0.12	3.9	0.02	0.14	-2.03	1.12	-0.23*
Race	2.64	2.56	0.08	-8.6	2.8	-0.26*	-114.7	125.66	-0.11
Education	0.18	0.18	0.08	-0.26	0.19	-0.11	-4.1	8.57	-0.05
Proper Equipment	-3.68	0.22	-0.14	9.28	0.24	0	3.9	10.92	0.04
Department interaction	-0.46	0.25	-0.18*	0.46	0.27	0.17	-6.13	12.68	-0.07
Expectations	0.25	0.27	0.1	-26	0.3	-0.1	-8.84	12.75	-0.11
Accomplishments	-1.09	0.24	-0.48*	0.99	0.27	0.42*	2.99	12.21	0.04
Hours worked	4.88	0.03	0.12	-4.27	0.03	-0.1	1.09	1.54	0.08
Receptive	0.14	0.28	0.05	-0.26	0.3	-0.1	-6.4	13.69	-0.08
Supervisors Gender	4.1	0.36	0	-0.2	0.39	-0.03	11.9	17.7	0.07
Tenure	-1.95	0.05	-0.03	7.98	0.05	0.13	0.6	2.49	0.03
??????	1.92	0.02	0.06	-3.36	0.02	-0.1	0.2	1.29	0.02
Specific training	1.7	0.08	0.01	-1.5	0.09	-0.01	-3.98	4.07	-0.13
Physical effort	7.29	0.37	0.01*	-9.88	0.41	-0.24	-1.9	18.62	-0.01
Physical danger	-1.56	0.73	-0.22*	0.47	0.81	0.06	-11.28	36.28	-0.05
Steady Work	-1.57	1.64	-0.07	4.27	1.8	0.18*	16.07	80.46	0.02
Work with co-workers	-0.1	0.62	-0.01	1.18	0.68	0.15	1.67	30.62	0.007
Supervise others	-6.66	0.5	-0.01	-1.09	0.54	-0.19*	15.53	24.52	0.08
Clear goals	-0.28	0.23	-0.12	-0.16	0.25	-0.06	7.29	11.63	0.09
Freedom	-0.86	0.3	-0.24*	0.38	0.33	0.1	1.39	15.07	0.01
Discrimination	-0.36	0.58	-0.05	0.92	0.63	0.14	29.1	28.21	0.14
Sharing Ideas	-0.19	0.3	-0.07	0.83	0.32	0.32*	-20.4	14.73	-0.25
Trust in supervisor	3.266	0.26	0	0.18	0.28	0.07	22.14	12.86	0.3

The major themes in this analysis are related to gender, race, feeling accomplished and not supervising others. Women and non-white police report levels of poor job satisfaction as do some older officers and those being supervised as opposed to supervising. Perhaps some policy changes or programs could be developed where the officers' feelings of inferiority, be they caused by sex, race or rank, could be considered.

Again, the research on job satisfaction for police suggests that low levels of job satisfaction can result in poor quality police performance.

When the task of comparing the experimental department to that of the comparison departments is considered, we conclude that Abington's police officers are reporting feeling less sad and blue than those in Cheltenham. In Derry Township the officers were found to be concerned about certain aspects of the management styles of supervisors.

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Chapter Five: Community Satisfaction

Abstract: A citizen-police satisfaction survey was mailed to residents at random in each of the program sites as well as comparison groups. Citizens were asked to complete the survey and return it in a self-addressed stamped envelope. The analysis indicated that statistical differences existed on a number of police performance variables when the responses were compared on each program site with their corresponding comparison group.

Ever since the birth of policing, there has been a strong, influential relationship between law enforcement and the community. This relationship is one of the most integral parts of effective police strategies. So in recent years there has been a push to receive feedback from the community about their feelings of police performance. “Citizen satisfaction surveys” and the like, have become popular ways for police departments to be assessed by the audience they are serving. Many policy and procedure experts say this is a great tool to implement, which in return will produce valuable results about the public sentiment of performance of any service in question. David Edwards, from Atlanta Georgia, says that policing “is like running a business, and we want to know what our customers think”. Edwards was involved in a citizen satisfaction survey which yielded about 600 respondents in the Atlanta area. This survey rated the city’s ability to deliver services to its inhabitants, and the quality of that service. The results of their survey were indicative of a public sentiment which was disappointed in the performance of their police department (Suggs 2003). Since then Atlanta has initiated some new public policies to mend the weak spots in their department.

Other departments across the country have also administered such surveys to evaluate their performance. In Boston, Massachusetts Police Chief Roy Melnick, used his public satisfaction survey as a bridge between the police and the community, creating

stronger views on community policing and neighborhood watch type programs (Ashland 2003). Another survey conducted in New York put a slight spin on their “neighborhood satisfaction survey” and yielded some very valuable information. “By limiting the survey to people who have had recent dealings with the police”, Commissioner Kerick of the NYPD says, “we can get a much truer picture of customer satisfaction than random polling surveys, which too often include individuals who have had no contact with the police and whose opinions are largely based on what they have heard” (Cardwell 2001). Kerick’s method of acquiring feedback was rather important to the functions of his police department. He has been quoted as saying that the definition of success in his department must include more than heartening crime data. It is thought that bridging the gap between the community and law enforcement has resulted and will continue to produce better community relations, a higher trust in local law enforcement, better reporting and faster -responses. To continue this community-police relationship, Kerick has ordered his top officers to attend community meetings in person and file reports on public concerns.

Conroe Police department in Texas have also been working on creating better community relations as well as a better understanding of the thing which is residents places top concern. While only being Chief of Police for just a year, Chief Charles Ray has already made many steps to fulfill his promises of better community satisfaction and a more focused police direction. “We, as a police agency, are genuinely interested in finding out what our citizens feel are the problems they face in the community from a policing standpoint and how we might be better able to serve them”, says Ray, “These surveys give us a better understanding of that.” (Howie 2004) Chief Ray and all of the

other Police departments who initiate community satisfaction surveys are all looking for the best and most efficient ways to provide protection, respond to emergencies, and provide assistance to those who need them. Granted these things are the most basic and fundamental goals of a police department, however when you examine the sub categories that each of these goals you can see how extremely wide the range of circumstances that a police department faces is. By enabling the community to provide feedback to the police, law enforcement will be able to better pinpoint the places where more attention should be paid, in return creating a better and smoother operating police system.

The Study

In each of the program sites (Abington, Derry and the state of Pennsylvania) 400 questionnaires were mailed to residents along with a stamped addressed envelope for easy return to the research team. In addition to the program sites, questionnaires were also mailed to residents in Cheltenham, Derry and the state of New Jersey. Respondents in these jurisdictions were asked to answer the same questionnaire as did the residents in the program jurisdictions. In three of the townships involved in this study the addresses were randomly gleaned from tax roles of residents (Cheltenham, Abington and Derry). In Susquehanna Township and New Jersey respondents were selected at random for inclusion from telephone white pages. The Pennsylvania State Police supplied researchers with a list of residents who had contact with the police in the past year. In each case 400 questionnaires were mailed to residents except for New Jersey where the number of mailed questionnaires was reduced to 100.

The average scores received from citizens are listed in the following tables (Tables 5.1 through 5.6). The aggregated average scores are listed as a report card for

each of the jurisdictions involved where 5 represents a perfect score and 1 represents the lowest possible score.

The residents in Pennsylvania (remember these respondents were gleaned from a list of people that had reason to call the state police in the previous calendar year. As you can see in Table 5.1 the residents scored the state police on a number of performance indicators. The best score in Part 1 was 3.8 on the variable “control excessive use of force” followed by, “show respect for citizens” at 3.7. The scores in this section ranged from 3.1 to 3.8. In Part 2 of the report card the highest scores were on “they take charge” and “are professional” with average scores of 3.8.

The residents from New Jersey gave their troopers a range of scores on Part 1 from a low of 3.3 to a high score of 4.0. The state police in New Jersey scored the highest on variable, “provide traffic safety enforcement” with a score of 4.0. As cursory examination of the scores listed in Part 2 (Table 5.2) will reveal some differences between the two state police forces. An examination and discussion of the significant differences between these departments will follow in this chapter.

Table 5.1 Report Card: Pennsylvania State Police

Part I: (Responses to these questions are based on a range from 1-5; Values for each are as follows: **1:** Not very well at all, **2:** Below acceptable performance, **3:** There is definite room for improvement, **4:** There is reasonable performance, **5:** Perfect performance)

How well does the PA State Police Dept...	Mean Score:
1. Protect you from violent crime	3.2
2. Behave honestly with citizens	3.5
3. Show respect for citizens	3.7
4. Reduce feelings of fear about crime	3.3
5. Respond quickly to calls for service	3.1
6. Control excessive uses of force	3.8
7. Behave in a helpful and friendly manner	3.7
8. Prevent crime	3.1
9. Solve crime	3.1
10. Keep order on the streets	3.3
11. Protect the fabric of the community	3.2
12. Establish safe environments	3.4
13. Foster economic/social development	3.1
14. Develop a sense of community well being	3.4
15. Overall performance score	3.5
16. Provide traffic safety enforcement	3.5
17. Provide a visible presence	3.3

Part II: (Responses to these questions are based on a range from 1-5; Values for each are as follows: **1:** Strongly disagree, **2:** Somewhat disagree, **3:** Neutral, **4:** Somewhat agree, **5:** Strongly agree)

The PA State Police...	Mean Score:
18. Treats all citizens the same regardless of race or ethnicity	3.2
19. Make me feel afraid that they will arrest me	1.8
20. Are practicing brutality	1.5
21. Are tough enough on street crime	3.2
22. Are tough on narcotics offenders	3.3
23. Are very helpful to crime victims	3.3
24. Harass kids in my neighborhood	1.5
25. Do a lot to prevent crime	3.0
26. Cooperate with the community	3.5
27. Are very helpful to residents	3.5
28. Are eager to receive information about crime	3.5
29. Only talk to residents that are crime suspects	2.1
30. Are professional	3.8
31. Are friendly	3.4
32. Take charge	3.8
33. Listen to residents	3.6
34. Are flexible	3.1
35. Seem relaxed	3.0
36. Seem argumentative	2.0
37. Are interested in maintaining a relationship	2.9
38. Give residents a say in what police do	2.4
39. Respectfully enforce the law	3.4
40. Impartially explain the law to residents	3.2

Table 5.2 Report Card: New Jersey State Police

Part I: (Responses to these questions are based on a range from 1-5; Values for each are as follows: **1:** Not very well at all, **2:** Below acceptable performance, **3:** There is definite room for improvement, **4:** There is reasonable performance, **5:** Perfect performance)

How well does the N.J. State Police Dept...	Mean Score:
1. Protect you from violent crime	3.4
2. Behave honestly with citizens	3.3
3. Show respect for citizens	3.5
4. Reduce feelings of fear about crime	3.3
5. Respond quickly to calls for service	3.8
6. Control excessive uses of force	3.6
7. Behave in a helpful and friendly manner	3.6
8. Prevent crime	3.3
9. Solve crime	3.3
10. Keep order on the streets	3.8
11. Protect the fabric of the community	3.6
12. Establish safe environments	3.6
13. Foster economic/social development	3.0
14. Develop a sense of community well being	3.3
15. Overall performance score	3.5
16. Provide traffic safety enforcement	4.0
17. Provide a visible presence	3.7

Part II: (Responses to these questions are based on a range from 1-5; Values for each are as follows: **1:** Strongly disagree, **2:** Somewhat disagree, **3:** Neutral, **4:** Somewhat agree, **5:** Strongly agree)

The N.J. State Police...	Mean Score:
18. Treats all citizens the same regardless of race or ethnicity	2.8
19. Make me feel afraid that they will arrest me	2.1
20. Are practicing brutality	2.0
21. Are tough enough on street crime	3.0
22. Are tough on narcotics offenders	3.0
23. Are very helpful to crime victims	2.9
24. Harass kids in my neighborhood	1.8
25. Do a lot to prevent crime	3.1
26. Cooperate with the community	3.2
27. Are very helpful to residents	3.3
28. Are eager to receive information about crime	3.3
29. Only talk to residents that are crime suspects	2.4
30. Are professional	3.6
31. Are friendly	3.3
32. Take charge	3.4
33. Listen to residents	3.4
34. Are flexible	2.9
35. Seem relaxed	2.7
36. Seem argumentative	2.6
37. Are interested in maintaining a relationship	2.9
38. Give residents a say in what police do	2.6
39. Respectfully enforce the law	3.2
40. Impartially explain the law to residents	3.0

The results of the Abington residents' scores on Part 1 of the citizen satisfaction survey appear in Table 5.3 below. Notice the overall increases in the average scores with a range between 3.9 and 4.3. (Pennsylvania State Police scores ranged between 3.1 to 3.8). The Abington Police scored highest on the "behave in a helpful and friendly manner" with a 4.3 and a 3.9 on "solve crime" as the lowest. The Cheltenham police also scored the highest (a tie with "respond quickly to calls for service") with "behave in a helpful and friendly manner." The lowest scores on these municipal police surveys were higher than the highest from the state police.

Both the Abington and Cheltenham police scored seemingly healthy attributes on the citizen satisfaction survey. Both police departments scored high (many above 3.5) on most variables in Part 2 of the list presented. Again, the statistical differences will appear later in this chapter.

Table 5.3 Report Card: Abington Twp.

Part I: (Responses to these questions are based on a range from 1-5; Values for each are as follows: **1:** Not very well at all, **2:** Below acceptable performance, **3:** There is definite room for improvement, **4:** There is reasonable performance, **5:** Perfect performance)

How well does the Abington Police Dept...	Mean Score:
1. Protect you from violent crime	4.2
2. Behave honestly with citizens	4.2
3. Show respect for citizens	4.2
4. Reduce feelings of fear about crime	4.1
5. Respond quickly to calls for service	4.3
6. Control excessive uses of force	4.2
7. Behave in a helpful and friendly manner	4.3
8. Prevent crime	4.0
9. Solve crime	3.9
10. Keep order on the streets	4.2
11. Protect the fabric of the community	4.2
12. Establish safe environments	4.2
13. Foster economic/social development	4.0
14. Develop a sense of community well being	4.1
15. Overall performance score	4.1

Part II: (Responses to these questions are based on a range from 1-5; Values for each are as follows: **1:** Strongly disagree, **2:** Somewhat disagree, **3:** Neutral, **4:** Somewhat agree, **5:** Strongly agree)

The Abington Police...	Mean Score:
16. Treats all citizens the same regardless of race or ethnicity	3.8
17. Make me feel afraid that they will arrest me	1.6
18. Are practicing brutality	1.6
19. Are tough enough on street crime	3.8
20. Are tough on narcotics offenders	3.8
21. Are very helpful to crime victims	3.9
22. Harass kids in my neighborhood	1.6
23. Do a lot to prevent crime	3.9
24. Cooperate with the community	4.2
25. Are very helpful to residents	4.2
26. Are eager to receive information about crime	4.1
27. Only talk to residents that are crime suspects	1.8
28. Are professional	4.2
29. Are friendly	4.1
30. Take charge	4.1
31. Listen to residents	3.9
32. Are flexible	3.9
33. Seem relaxed	3.8
34. Seem argumentative	2.0
35. Are interested in maintaining a relationship	3.7
36. Give residents a say in what police do	3.3
37. Respectfully enforce the law	4.0
38. Impartially explain the law to residents	3.7

Table 5.4 Report Card: Cheltenham Twp.

Part I: (Responses to these questions are based on a range from 1-5; Values for each are as follows: **1:** Not very well at all, **2:** Below acceptable performance, **3:** There is definite room for improvement, **4:** There is reasonable performance, **5:** Perfect performance)

How well does the Cheltenham Police Dept...	Mean Score:
1. Protect you from violent crime	3.9
2. Behave honestly with citizens	4.2
3. Show respect for citizens	4.2
4. Reduce feelings of fear about crime	4.0
5. Respond quickly to calls for service	4.3
6. Control excessive uses of force	4.1
7. Behave in a helpful and friendly manner	4.3
8. Prevent crime	3.9
9. Solve crime	3.6
10. Keep order on the streets	4.1
11. Protect the fabric of the community	4.1
12. Establish safe environments	4.1
13. Foster economic/social development	3.4
14. Develop a sense of community well being	3.9
15. Overall performance score	4.1
16. Provide traffic safety enforcement	4.0
17. Provide a visible presence	4.0

Part II: (Responses to these questions are based on a range from 1-5; Values for each are as follows: **1:** Strongly disagree, **2:** Somewhat disagree, **3:** Neutral, **4:** Somewhat agree, **5:** Strongly agree)

The Cheltenham Police...	Mean Score:
18. Treats all citizens the same regardless of race or ethnicity	3.8
19. Make me feel afraid that they will arrest me	1.3
20. Are practicing brutality	1.3
21. Are tough enough on street crime	3.3
22. Are tough on narcotics offenders	3.3
23. Are very helpful to crime victims	3.3
24. Harass kids in my neighborhood	1.4
25. Do a lot to prevent crime	3.8
26. Cooperate with the community	4.1
27. Are very helpful to residents	4.1
28. Are eager to receive information about crime	4.1
29. Only talk to residents that are crime suspects	1.9
30. Are professional	4.1
31. Are friendly	4.3
32. Take charge	4.2
33. Listen to residents	4.0
34. Are flexible	3.9
35. Seem relaxed	4.0
36. Seem argumentative	1.5
37. Are interested in maintaining a relationship	3.7
38. Give residents a say in what police do	3.3
39. Respectfully enforce the law	4.0

The citizen survey scores from the residents of Derry and Susquehanna Townships appear in Tables 5.5 and 5.6. The Derry Police Department scores, as seen in Table 5.5 below show a point variation between 3.8 and 4.1 for the Part 1 attributes. The highest scores are “respond quickly to calls for service, keep order on the streets, establish safe environments and provide a visible presence.” The lowest scores are only .3 points lower than the highest. See Table 5.5. On the other hand, the Susquehanna Police did not appear to score as high as Derry. Their scores ranged from 3.1 to 3.9 which has more apparent variation than the Derry scores with a lower overall scoring. See Table 5.6. The statistical differences appear later in the chapter.

Table 5.5 Report Card: Derry Twp.

Part I: (Responses to these questions are based on a range from 1-5; Values for each are as follows: **1:** Not very well at all, **2:** Below acceptable performance, **3:** There is definite room for improvement, **4:** There is reasonable performance, **5:** Perfect performance)

How well does the Derry Police Dept...	Mean Score:
1. Protect you from violent crime	3.9
2. Behave honestly with citizens	3.8
3. Show respect for citizens	3.8
4. Reduce feelings of fear about crime	3.9
5. Respond quickly to calls for service	4.1
6. Control excessive uses of force	4.0
7. Behave in a helpful and friendly manner	3.8
8. Prevent crime	3.9
9. Solve crime	3.9
10. Keep order on the streets	4.1
11. Protect the fabric of the community	4.0
12. Establish safe environments	4.1
13. Foster economic/social development	3.7
14. Develop a sense of community well being	3.8
15. Overall performance score	3.9
16. Provide traffic safety enforcement	4.0
17. Provide a visible presence	4.1

Part II: (Responses to these questions are based on a range from 1-5; Values for each are as follows: **1:** Strongly disagree, **2:** Somewhat disagree, **3:** Neutral, **4:** Somewhat agree, **5:** Strongly agree)

The Derry Police...	Mean Score:
18. Treats all citizens the same regardless of race or ethnicity	3.6
19. Make me feel afraid that they will arrest me	2.0
20. Are practicing brutality	1.6
21. Are tough enough on street crime	3.6
22. Are tough on narcotics offenders	3.5
23. Are very helpful to crime victims	3.6
24. Harass kids in my neighborhood	2.0
25. Do a lot to prevent crime	3.5
26. Cooperate with the community	3.9
27. Are very helpful to residents	3.8
28. Are eager to receive information about crime	3.8
29. Only talk to residents that are crime suspects	2.0
30. Are professional	4.0
31. Are friendly	3.7
32. Take charge	4.0
33. Listen to residents	3.6
34. Are flexible	3.4
35. Seem relaxed	3.6
36. Seem argumentative	2.2
37. Are interested in maintaining a relationship	3.5
38. Give residents a say in what police do	3.0
39. Respectfully enforce the law	3.8
40. Impartially explain the law to residents	3.3

Table 5.6 Report Card: Susquehanna Twp.

Part I: (Responses to these questions are based on a range from 1-5; Values for each are as follows: **1:** Not very well at all, **2:** Below acceptable performance, **3:** There is definite room for improvement, **4:** There is reasonable performance, **5:** Perfect performance)

How well does the Susquehanna Police Dept...	Mean Score:
1. Protect you from violent crime	3.9
2. Behave honestly with citizens	3.7
3. Show respect for citizens	3.9
4. Reduce feelings of fear about crime	3.8
5. Respond quickly to calls for service	3.9
6. Control excessive uses of force	3.5
7. Behave in a helpful and friendly manner	3.9
8. Prevent crime	3.6
9. Solve crime	3.1
10. Keep order on the streets	3.7
11. Protect the fabric of the community	3.6
12. Establish safe environments	3.7
13. Foster economic/social development	3.1
14. Develop a sense of community well being	3.6
15. Overall performance score	3.8
16. Provide traffic safety enforcement	3.7
17. Provide a visible presence	3.9

Part II: (Responses to these questions are based on a range from 1-5; Values for each are as follows: **1:** Strongly disagree, **2:** Somewhat disagree, **3:** Neutral, **4:** Somewhat agree, **5:** Strongly agree)

The Susquehanna Police...	Mean Score:
18. Treats all citizens the same regardless of race or ethnicity	3.5
19. Make me feel afraid that they will arrest me	1.6
20. Are practicing brutality	1.5
21. Are tough enough on street crime	3.2
22. Are tough on narcotics offenders	3.1
23. Are very helpful to crime victims	3.3
24. Harass kids in my neighborhood	1.4
25. Do a lot to prevent crime	3.5
26. Cooperate with the community	3.8
27. Are very helpful to residents	3.7
28. Are eager to receive information about crime	3.7
29. Only talk to residents that are crime suspects	1.8
30. Are professional	4.0
31. Are friendly	3.9
32. Take charge	3.8
33. Listen to residents	3.7
34. Are flexible	3.5
35. Seem relaxed	3.5
36. Seem argumentative	1.7
37. Are interested in maintaining a relationship	3.5
38. Give residents a say in what police do	2.8
39. Respectfully enforce the law	3.7

The data collected in Pennsylvania and New Jersey was designed to illuminate the similarities and differences between citizens' attitudes toward their state police force. We do see significant differences between a number of independent variables listed in Table 5. 7. The New Jersey citizens were older than their Pennsylvania counterparts. They also lived in the state fewer years than the responding Pennsylvanians, had more education, a higher income level and believed crime was a problem in their neighborhoods. The only attribute that was significantly significant between these two states was the variable "police responded quickly." New Jersey residents responded that they believed their state police respond to calls quicker than in Pennsylvania.

Table 5.7 Significant Differences (Pennsylvania & New Jersey)*

	Pennsylvania		New Jersey		t.
	Mean	S.D.	Mean	S.D.	
Age	43	13.24	54	17.97	-3.23
Years lived in state	33	20.09	8	15.95	.80
Education	3.04	1.09	4.03	1.16	-3.94
Income level	2.19	.98	2.73	.78	-2.62
Politics	1.30	.70	1.90	.80	-3.57
Crime in neighborhood	2.64	.74	3.03	.61	-2.47
Police respond quickly	3.17	1.36	3.80	1.37	-2.05

*Significant at .05

The residents in Abington and Cheltenham differed in terms of their gender, the Abington respondents were more “female.” See Table 5.8. The Cheltenham residents lived in the state longer and had a higher lever of education than their Abington counterparts. In a word, the two townships are rather similar and quite comparable. The two townships did see significant differences on performance variables. Abington citizens gave their police significantly higher scores on their ability to 1. Protect citizens from violence, 2. Solve crimes, 3. Foster economic development, and 4. Afraid they will arrest me. The “Afraid they will arrest me” variable scored rather low in the aggregate (1.66 in Abington and 1.34 in Cheltenham) which indicates that residents are not really afraid of being arrested but in Abington Township they are, nevertheless, significantly more afraid of being arrested than residents in Cheltenham.

Table 5.8 Significant Differences (Abington & Cheltenham)*

	Abington		Cheltenham		t.
	Mean	S.D.	Mean	S.D.	
Sex	1.57	.50	1.44	.54	-1.99
Years lived in state	24.14	16.51	42.14	22.35	6.45
Education	2.96	.84	3.31	.81	3.19
Protect citizens from violence	4.25	.74	3.95	.91	-2.59
Solve crimes	3.94	.83	3.68	1.16	-1.82
Foster economic development	4.02	.83	3.57	1.24	-2.94
Afraid they will arrest me	1.66	1.16	1.34	.80	-2.53

*Significant at .05

The residents of Derry and Susquehanna Townships differed somewhat on their recorded independent variables. See Table 5.9. Respondents in Derry were significantly older, they lived in the state longer, they live in a more diverse neighborhood, they tend to have less higher education, be more republican and believed that crime was a problem in the neighborhoods. The citizens in Derry gave their police significantly higher scores on 1. controlling excessive force, 2. solving crimes, 3. fostering economic development, 4. afraid they will arrest me, and 5. they believed that their police department harassed children.

Table 5.9 Significant Differences (Derry & Susquehanna)*

	Derry		Susquehanna		t.
	Mean	S.D.	Mean	S.D.	
Age	53	13.66	45	16.91	3.07
Years lived in state	41	20.30	30	23.43	3.05
Race	2.07	.41	1.81	.57	3.16
Education	3.03	.85	3.40	1.18	-2.18
Politics	1.37	.68	1.63	.85	-1.96
Crime in the neighborhood	3.34	.62	3.11	.57	2.32
Control excessive use of force	4.07	.99	3.57	1.62	2.27
Solve crimes	3.93	.87	3.19	1.61	3.28
Foster economic development	3.72	1.04	3.14	1.61	2.55
Afraid they will arrest me	2.09	1.31	1.64	1.09	2.20
They harass children	2.07	1.30	1.44	.90	3.35
Seem argumentative	2.27	1.35	1.79	1.11	2.30

*Significant at .05

In summary, The Pennsylvania citizens participating in this study gave their state police significantly lower scores on their ability to quickly respond to crime. However, the citizens in Derry and Abington (Pennsylvania township program sites) collectively rated their police departments significantly higher on their police departments' ability to solve crime, their ability to foster economic development, and the level to which they are afraid that they will be arrested. The evidence suggests that the accredited departments have significantly influenced citizens' attitudes on these variables.

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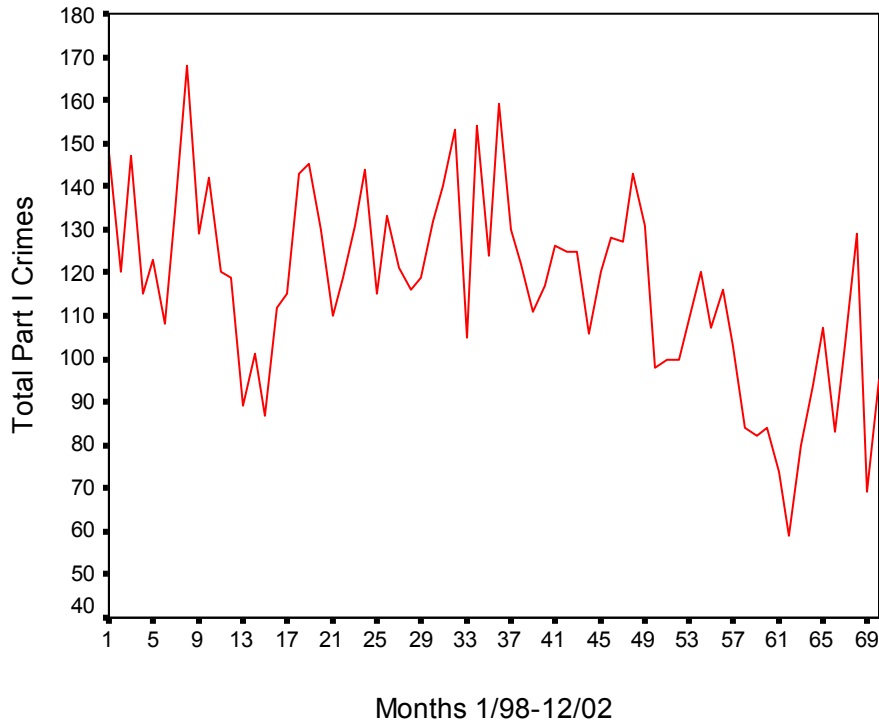
Chapter Six: Crime Analysis

Abstract: Interrupted time series analysis was employed to assess the impact on crime rates in both the study municipalities and their counterparts. Generally speaking (there are a few exceptions) most municipalities realized a drop in both Part 1 and part 2 crimes after the inception of the accreditation. However, the drops in crime rates were not significantly significant.

For Abington, Cheltenham, Derry, and Susquehanna Townships monthly Uniform Crime Report data was extracted from the Pennsylvania State Police Web Site. For the analysis of the State Police crime numbers, data was supplied by the Pennsylvania State Police. The objective was to operationalize crime numbers as a monthly time series. This allowed for a statistical analysis of the impact of the accreditation using interrupted time series with ARIMA modeling. The ARIMA intervention modeling considers the behavior of a time series prior to the onset of some social intervention (e.g. accreditation) and measures the true impact of the intervention at some pre-determined point in the series.

The Part 1 crime data in Abington is displayed in Graph 6.1A below. The data displayed is the aggregate raw number (by month) of all Part 1 crimes reported to the Abington Township Police in the study period (January, 1998 to December 2002). After the onset of the accreditation we see a decrease of the Part 1 crime totals by 31 incidents. That is, after the onset of the accreditation the crime numbers were reduced by 31 reported crimes in the 19 months after the intervention. The ARIMA model in this series is a MA1 or $(0, 0, 1)$ with a t-ratio of -6.18 which is statistically significant. In other words, total Part 1 crimes in Abington Township did decrease after the onset of accreditation and the reduction was significantly different when compared to the pre-intervention time series.

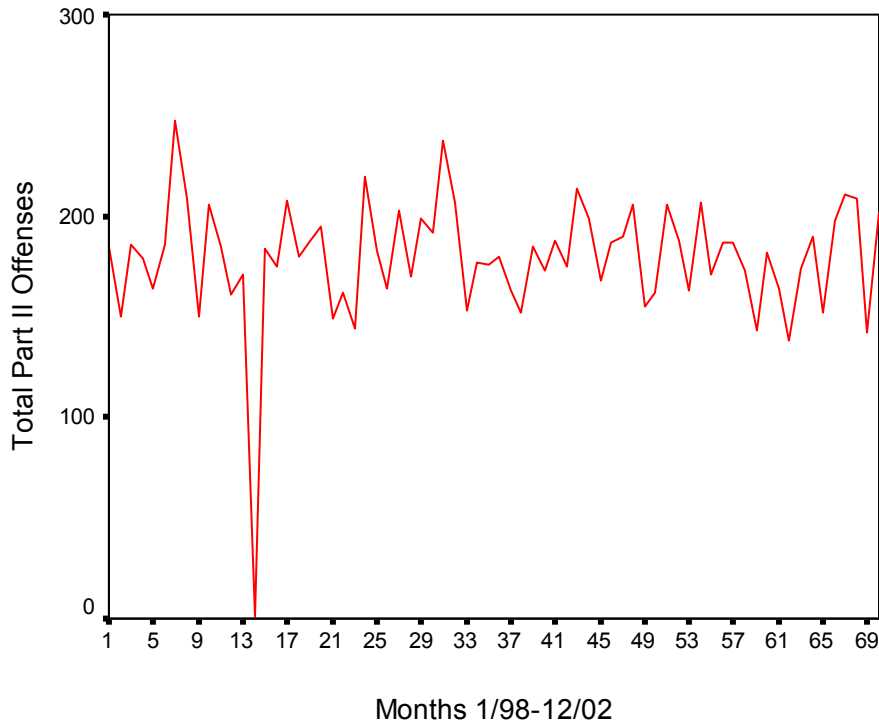
Graph: 6.1 Total Part I Crimes for Abington Twp.



The Part 2 crime data in Abington Township is displayed in Graph 6.2 below.

The data displayed is the aggregate raw number (by month) of all Part 2 crimes reported to the Abington Township Police in the study period. After the onset of the accreditation program we really can not discern any obvious changes in the crime trend over time other than random variation above or below the average. We do see, however, a noticeable downward “spike” in the time series at month number 14. Uniform Crime Data submission is submitted voluntarily by municipalities to the state. Perhaps the data was obscured or lost. Nevertheless, the inclusion of that missing monthly crime total would not alter the end result. Indeed, part 2 crimes in Abington were reduced over the time series by one-half of one point after the intervention. The ARIMA model in this series is a MA1 or (0, 0, 1) with a t-ratio of -.077 which is not significantly significant. In other words the accreditation did not significantly impact Part 2 crimes in Abington Township.

Graph 6.2 Total Part II Offenses for Abington Twp.

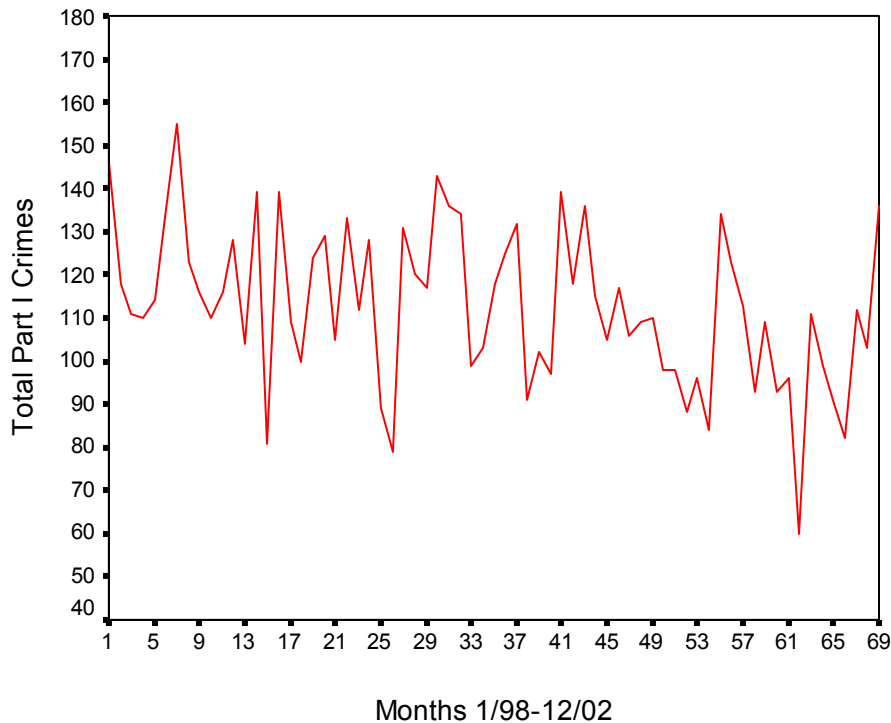


Abington Township received both accreditation status from the national accreditation agency as well as the state's program. The evaluators suggested to the police administrators in the accreditation sites that they select an appropriate township for use as a comparison group. The police administration in Abington selected Cheltenham Township as a comparison group. Cheltenham Township is a contiguous township to Abington and is situated to the east between them and the city of Philadelphia. Both police departments are similar in terms of size and structure, but Cheltenham did not pursue either state or national accreditation.

The time series for Cheltenham's reported Part 1 crimes appears in the aggregate below in Graph 6.3. Notice in Graph 6.3 how the series' behavior tends to randomly fluctuate around the average with the appearance of an overall reduction in the crime

numbers over time. The behavior of the series is not remarkably different than that of Abington Township's (see Graph 6.1A). When the time series was analyzed as an intervention at month number 50 (as was Abington) we see a reduction in reported Part 1 crimes of 16 points after the intervention month. Thus, the Part 1 crime declined in Cheltenham as it did in Abington and the reduction was statistically significant. The ARIMA model for the Cheltenham series is a MA1 or (0, 0, 1) with a t-ratio of -3.65 which is statistically significant.

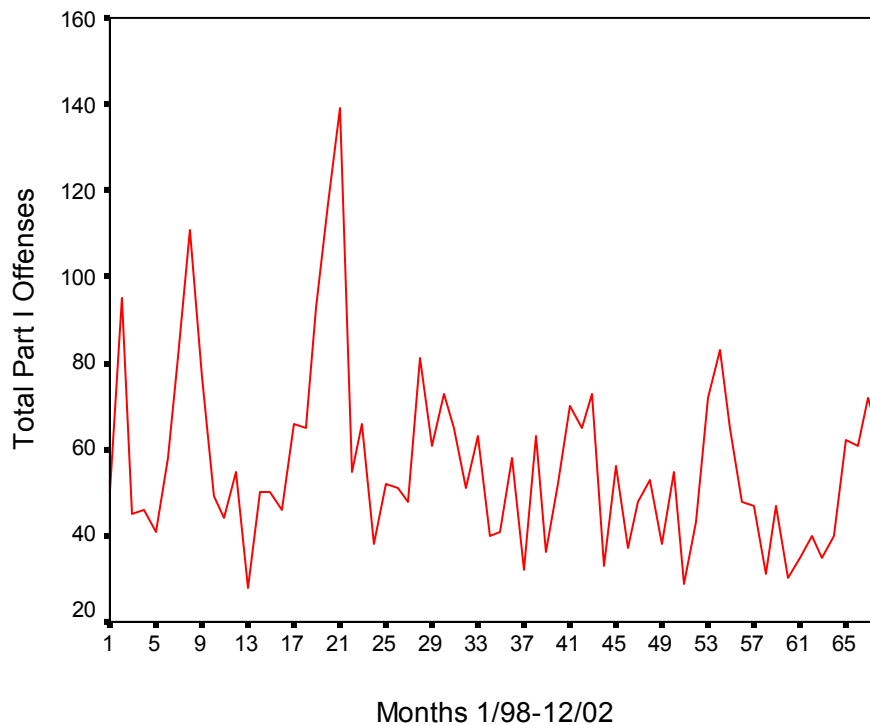
Graph 6.3 Total Part I Crimes for Cheltenham Twp.



The Part 2 aggregated crime data from Cheltenham Township appears below in Graph 6.4. The behavior of this series is not particularly remarkable except for three “spikes” occurring toward the beginning of the study, in month number 2, and 8 and 20.

Other than those few abnormalities in the series the Part 2 crime data simply fluctuate around the mean throughout the study period. Overall, the Part 2 crimes were reduced by 11 points after the intervention. This seems lower than in Abington but Abington did not realize early on abnormalities in the time series behavior of Part 2 crimes. However, this reduction in Cheltenham Township is not statistically significant. The ARIMA model in this series is a MA1 or (0, 0, 1) with a t-ratio of -1.59 which is not significant.

Graph 6.4 Total Part II Crimes for Cheltenham Twp.



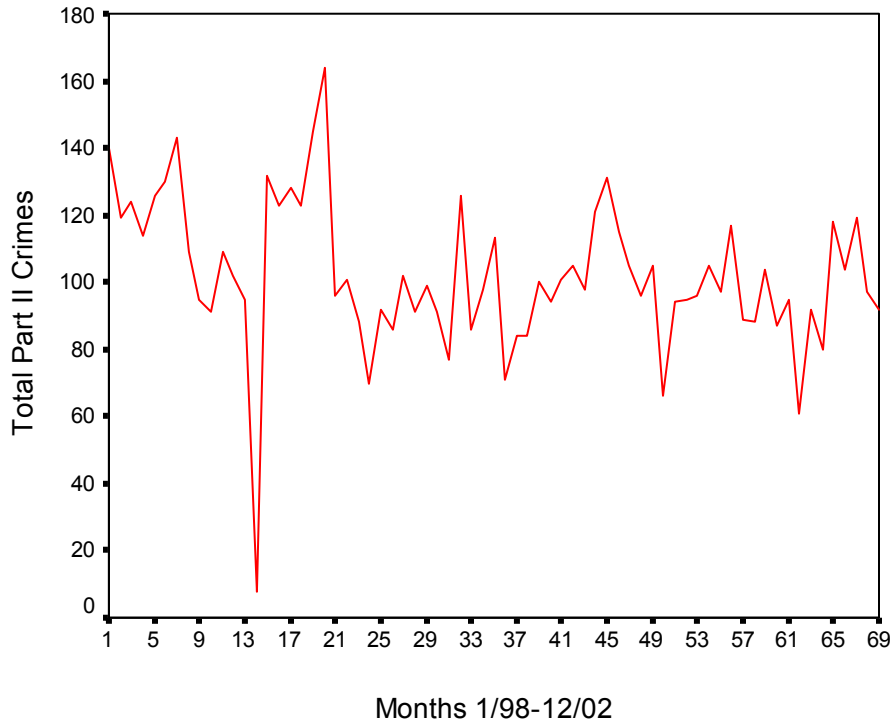
The crime data from Abington and Cheltenham suggest an overall reduction in both Part 1 and Part 2 in both municipalities over the time series. The statistically significant reduction in Part 1 crimes in both the study and the comparison municipality at the time of the accreditation intervention suggests that the intervention did not impact

on crime behavior in Abington Township. This conclusion is strengthened as the behavior of the time series in Cheltenham is rather similar to that of Abington absent the intervention. This suggests an exogenous event caused a reduction in Part 1 crimes in both municipalities.

The police administrators in Derry Township which is Pennsylvania State accredited selected Susquehanna Township as a comparison municipality. The police departments are generally the same size and conduct similar functions. Both police departments patrol suburban municipalities. The Susquehanna Police Department is not accredited.

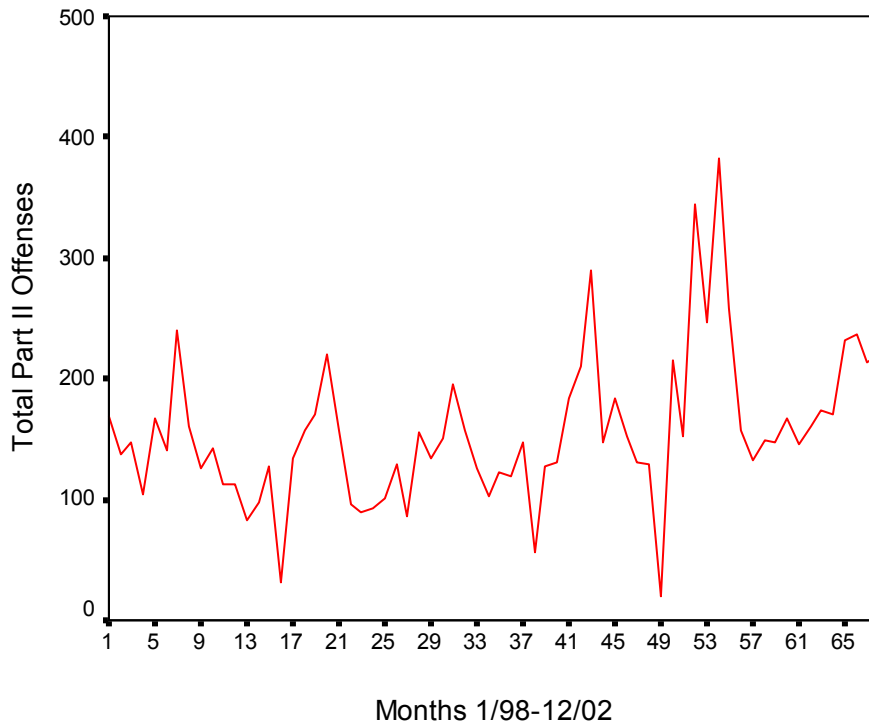
The Part 1 aggregated crime data from Derry Township is graphically displayed in Graph 6.5. The most striking feature of this data is the “spike” downward at month number 14. Again, Uniform Crime Report Data does not always appear in valid formats especially if it rests in computer programs over time. The ARIMA model for this series is AR1, differenced once, or (1, 1, 0) with a t-ratio of .204. This indicates that Derry did not have a statistically significant increase of reported Part 1 crimes at the time of the intervention. The reported crimes rose 4 points after the department became accredited.

Graph 6.5 Total Part I Crimes for Derry Twp.



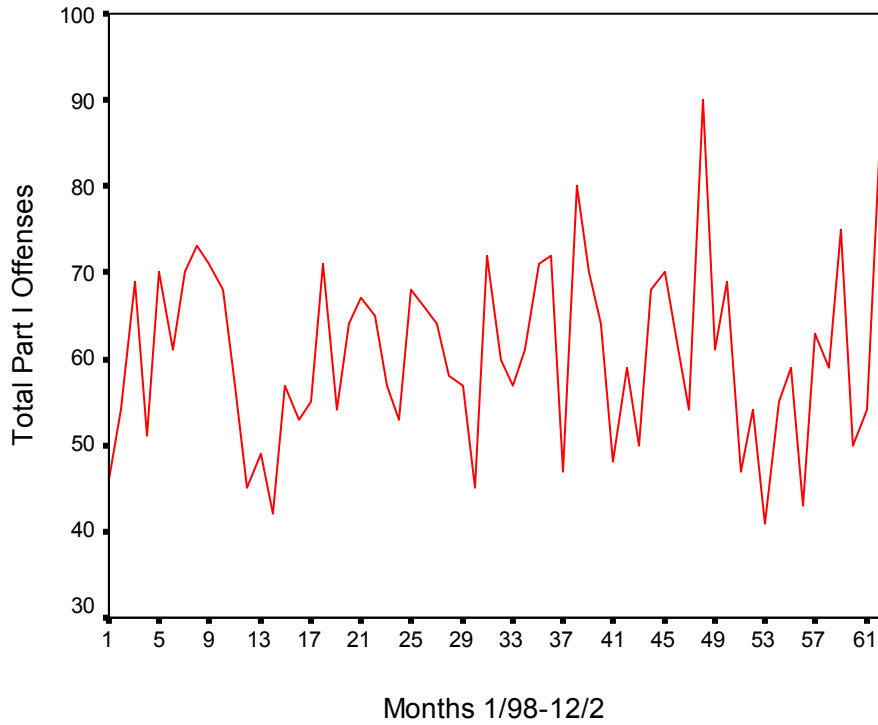
The Part 2 crime data, in the aggregate, appears as a time series in Graph 6.6 for Derry Township. Notice a “spike” downward at about month number 49 (which happens to be one month prior to the month of intervention). After this severe downward crime month the Part 2 crime in Derry rose 133 points after the intervention. The ARIMA model for this series is AR1, differenced 1 or (1, 1, 0) with a t-ratio of 2.64 which is a statistically significant increase in aggregated crime numbers. Thus, after the intervention Both Part 1 and part 2 crime numbers in Derry Township increased with a statistically significant increase in Part 2 Crime.

Graph 6.6 Total Part II Crimes for Derry Twp.



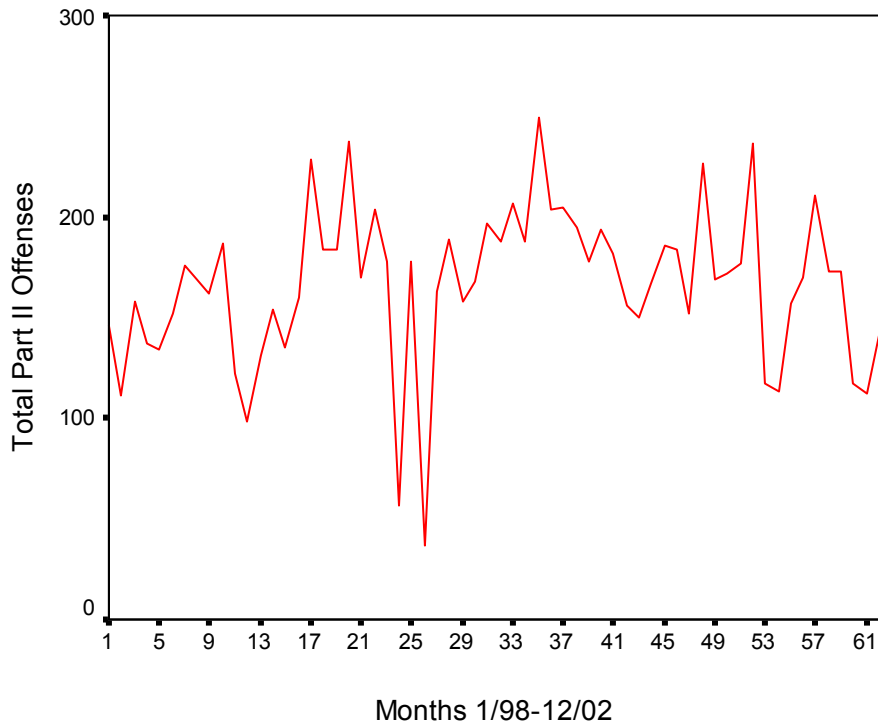
The Part 1 crime data for Susquehanna Township appears in the aggregate as a time series in Graph 7. In general, the crime data tends to fluctuate around the mean with little remarkable crime changes over time. The ARIMA model for this series is a differenced 1, MA1, or (0, 1, 1) with a t-ratio of -1.71 which is not statistically significant. The crime numbers are reduced after the intervention by 8 points.

Graph 6.7 Total Part I Crimes for Susquehanna Twp.



The Part 2 aggregate crime data from Susquehanna Township appear as a time series in Graph 6.8. Despite some remarkable fluctuation in the series the difference is statistically significant with a 25 point reduction in crime after the intervention month. The ARIMA model for this series is a differenced 1, MA1 or (0, 1, 1) with a t-ratio of -1.05 which is not statistically significant. So, Susquehanna Township, without an intervention of accreditation realized a drop in reported Part 2 crimes in the study period but this drop was not statistically significant.

Graph 6.8 Total Part II Crimes for Susquehanna Twp.

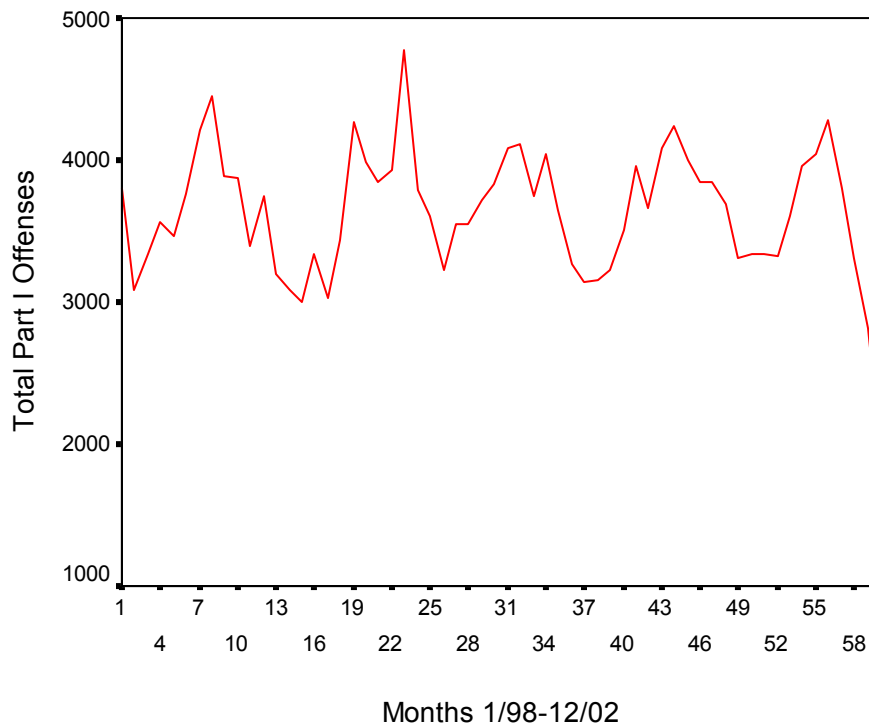


The crime data analysis in Derry and Susquehanna Townships reveal some significant changes in reported crime numbers after the intervention. Derry Township saw a increase in reported crime, both Part 1 and Part 2. In Susquehanna Township we saw a reduction in reported Part 2 crimes even with the absence of an intervention. So, we can conclude that either crime reporting is independent of the of the intervention, or that the intervention in Derry Township actually caused a statistically significant increase of crime reporting and the reduction in crime in the neighboring Susquehanna Township is a spurious finding.

The Reported Part 1 crime data from the total crime activity reported to the Pennsylvania State Police Barracks is aggregated and appears as a time series in

Graph 6.9. Other than a sharp reduction in crime occurring at month number 56 there seems to be a random fluctuation above and below the average during the study period with no discernable reduction in crime at the point of intervention. The ARIMA model in this series is a AR2, differenced once, MA1 or (2, 1, 1) with a t-ratio of .18 which is not statistically significant. Where reported crime to the state police did rise 71 points after the intervention month, this increase was not statistically significant.

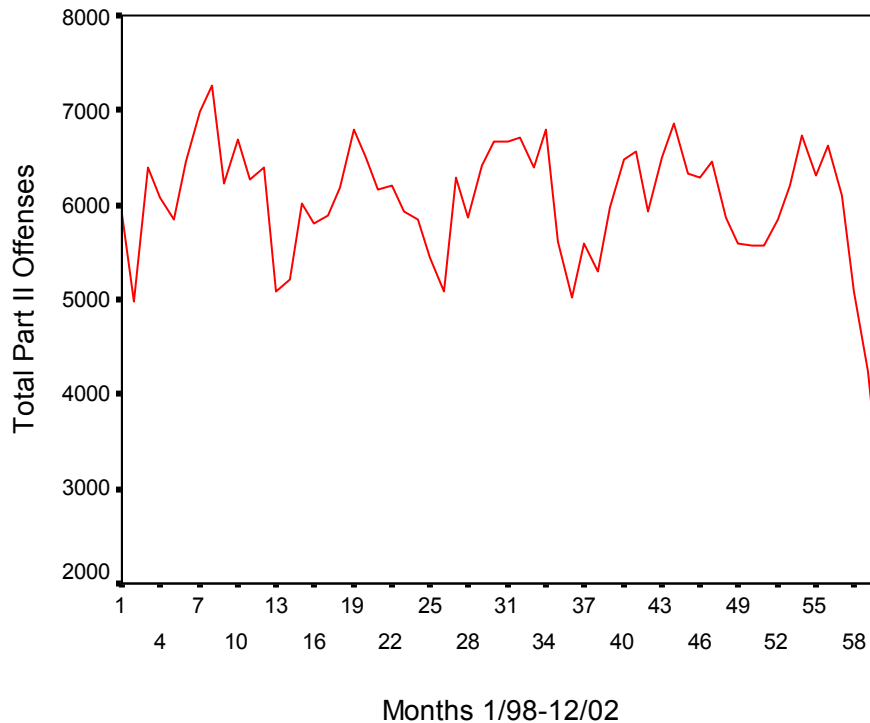
Graph 6.9 Total Part I Crimes for PA State Police (compiled)



The reported Part 2 crimes are displayed in Graph 6.10. The data fluctuate at random above and below the average. Toward the end of the series the crime numbers drop from nearly 7,000 a month to less than 3,000. This drop has not been explained. The ARIMA model for the series is an AR2, differenced twice or (2, 2, 0) with a t-ratio of

-0.25 which is not significant. Although crime numbers were reduced 141 points the model indicates no significant impact at the month of intervention.

6.10 Total Part II Crimes for PA State Police (compiled)



To review, In Abington and Cheltenham, we see a drop in the numbers for reported Part 1 crimes after the intervention month, and the reductions were statistically significant. However, as both municipalities realized a crime reduction then we conclude that the change was due to an exogenous event not related to the accreditation.

For the Pennsylvania State Barracks we found an increase in Part 1 crime and a reduction Part 2 crimes but the changes were not statistically significant. In the Derry Township analysis we saw a statistically significant increase in Part 2 crimes. Thus, we conclude that the accreditation contributed toward an increase in the reporting of Part 2 crime in Derry Township. A casual review of the crime tables in the Appendix reveals

that marijuana arrests along with drunkenness and disorderly conduct arrests rose noticeably during the time following the intervention. This will have to be examined further. That being said, generally speaking, the accreditation did not have significant impact in reported Part 1 crime. However, some evidence suggests more aggressive enforcement followed the accreditation in Derry Township.

