Allocation of Personnel: Methodology for Required Staffing of Detectives

Elliott A. Gribble

Abstract

The purpose of this research is to investigate personnel needs for the investigative unit of law enforcement and show supportive means for allocation of additional detectives. Traditionally, personnel allocation formulas for law enforcement were designed for the uniformed patrol divisions using formulas that record required staffing needs by the tasks performed and the demographics of the community. Investigative positions have been filled based on the old adage of ten percent of the agency's total sworn personnel. Investigative assignments today require case clearance criteria such as; are there suspects, evidence or any additional information available for the resolution of criminal cases.

Many reported crimes today are lacking solvability factors and many are not being assigned for investigation due to the over-burdened caseload of staff detectives; thus, the need exists for additional detectives. An article in the July 1985 issue of Florida Police Chief magazine, written by the Pompano Beach Police Departments Planning and Research Unit, illustrated just such a methodology. In addition a statewide research project was completed which involved the comparison of a two-part formula regarding time available verses time consumed.

History

Early in the nineteenth century, England in the absence of any organized police or detective force, people were forced to rely on their own initiative and resources to capture criminals who had not been caught red handed in the act of committing a crime (Klockars, 1985). In 1749, under Bow Street magistrate, Henry Fielding, publicly employed known criminals as constables to track down offenders and recover stolen goods; these individuals were called Bow Street Runners (Smith, 1985).

Although these so called private investigators often impressed the public with their ability to apprehend criminals, their services were expensive and exceeded the price range of the average citizen.

In 1846, the first detective squad in the United States was created in Boston. New York followed in 1857 with Philadelphia and Chicago following several years later. Men from private agencies were often hired as investigators by police chiefs and their work with the police rarely lasted longer than the police chief who hired them (Johnson, 1979).

The historical review of investigation practices in Britain, the United States and France during the last two hundred years revealed similarities and differences (Andrade, 1985). These three nations have attempted to suppress crimes through proactive and reactive investigation methods as well as policing. Philosophies within the community regarding crime control influenced the ways authorities responded to them. All three nations now find themselves swamped by more crime than their criminal justice systems seem capable of handling effectively.

Law enforcement believes that forces of crime and disorder today are not much

greater than they were in the past; However, today's public has higher expectations regarding what law enforcement can do to suppress crime. In addition, it is difficult for the public to accept the assertion that crime is merely a benign tumor that only gets worse as it is continuously rubbed (Andrade, 1985).

The public's demand for an effective response will probably continue to grow with belief that advances in science, distribution of effort, national planning, and allocation of resources can eventually reduce the crime problem. It is assumed that crime will cease to be regarded as one of the most serious social problems confronting society (Gleizal, 1981).

Rationale

In the 1980's, the Police Executive Research Forum researched three jurisdictions, Dekalb County, Georgia, Jacksonville, Florida and Wichita, Kansas. The departments examined, found that although criminal investigations do not solve all crimes, the work of the detective is often indispensable to solving many crimes (Eck, 1983).

Law enforcement personnel requirements for the detective unit have been restricted to crime statistics and the increasing needs for response to local crime and community needs. In 1983 the Commission of Accredited Law Enforcement Agencies (CALEA) set national standards for allocation and distribution of personnel and personnel alternatives.

A commentary in the CALEA manual, chapter 16.1.2 states, "The intent of the standard is to encourage the equalization of individual workloads among and within organizational components". The workload analysis should specify all incidents and factors used in making each workload assessment and indicate any time and location factors necessary to complete a task" (p.16-2).

Basing the allocation of personnel on workload demands can have a significant influence on the efficiency and effectiveness of the agency. The agency should attempt to prevent over or understaffing by ensuring that the personnel strength of an organizational component is consistent with the workload. The nature or number of tasks as well as their complexity, location, and time required for completion are some of the factors that influence workload demands.

The process of allocating personnel to each organizational component also permits the agency to determine the overall number of personnel required to meet its needs and fulfill its objectives. Formulas are utilized as an alternative method to show personnel needs either by the unit commander or the research and planning unit of the agency.

Investigative case assignment criteria and investigative time needed for casework is very important for determining personnel needs (Lindquist, O'Connell, & List, 1985). The planning and research unit of the Pompano Beach Police Department illustrated just such methodology. That same year the Florida Chapter of Association of Police Planning and Research Officers (APPRO) followed up the study with a state research project which involved the comparison of a two-part formula that includes investigative time available versus investigative time consumed.

The first part of the personnel formula addressed investigative time available. The derivation of this figure was hours of scheduled work during the sampled study

periods, minus sick time, vacation, and compensatory leave. The figure arrived at was actual work time. However, that figure does not reflect the actual time expended for investigation. Given the competition within political subdivisions and the reluctance to increase funding amount or sources, a more efficient method of determining investigative staffing requirements is necessary.

Research questions

1. How are law enforcement needs for additional detectives in investigations being met?
2. What specific personnel allocation formulas are available for needs assessment for investigations?
3. Is the 1985 study still an effective means to determine personnel allocation needs?

Methods

Personnel needs are met by identifying time restrictions from actual work hours (Appendix A). These time restrictions are; administrative, personal, the processing of no reports, court, training, meetings, and committees. Actual investigative time available was computed by subtracting total time restrictions from actual hours worked.

The second half of the personnel assessment formula addressed investigative time consumed (Appendix B). To arrive at a figure that would accurately reflect time consumption, case tracers were developed. Each case tracer, when assigned to actual investigations on a random basis, records every step taken by a detective and the corresponding time consumption.

All investigative actions are recorded and cease when the case is submitted to the prosecuting agency. Using a formula worksheet based on suggested criteria and using the total assigned cases separately from property and persons crimes, a percentage value was derived for staffing of detectives for each category.

The St. Johns County Sheriff's Office, during the 1995 budget process, utilized this assessment. A form designed to record actual times for each job related task (called a case tracer) was used by the two sections, and actual time used for specific job tasks were recorded. The data collected was actual time consumption; thus giving an accurate recording of investigative time spent for each section.

The case tracers were utilized for a period of three months, breaking down investigative, and administrative times. The Pompano Beach study determined average length of time needed to work certain crimes, i.e., burglary, robbery, aggravated assaults, and batteries. This investigative time was then divided by the number of cases assigned to the particular section, giving investigative time available per case. In budget year 1992/1993 the investigative personnel needs for the St. Johns County Sheriff's Office were provided by adapting an assessment needs formula introduced by the planning and research division of the Cincinnati, Ohio Police Department (Ammann, 1990). Although designed for the uniformed patrol division, was adapted for the needs of the investigations division (Appendix C).

Workload Computation Worksheet

A detective workload computation that had been developed was the tool used figuring required staffing of the detective unit (Appendix A). In order to complete this worksheet, one must have previously determined the average amount of time required to investigate an assigned case. Further, management must have decided the allocation of detective time, determining the goal number of hours, per day, to be spent investigating assigned cases (Appendix B). The 1985 state average time consumption for assigned cases as per the APPRO study is:

Burglary	5.48 hours
Robbery	8.90 hours
Property crime	3.24 hours
Persons crime	6.99 hours
Aggravated assault/battery	3.55 hours

Case tracer

The sections or units being surveyed should complete case tracers. The object of the case tracer is to gather time-consumption data in reference to a particular crime investigation (i.e., burglary, grand theft, etc.) from the beginning of the case assignment to completion, where the case is forwarded to the prosecuting agency or cleared from active investigation.

For survey work, any type crime or delegated work task can be monitored. For example, the St. Johns County Sheriff's Office used tracers for such tasks. A survey ran for three months among the property and persons crimes sections, monitoring time consumption strictly on case investigation.

A total of 960 hours were consumed utilizing two detectives from each section. Property crimes time consumption was 67%, and persons crimes 78%. What these percentages show are actual hours expended just to perform the investigations required of the unit or section. Assigned days off alone totaled 208 hours which was not part of this survey. Leave and sick time was also excluded. This is an example of how statistical data can be used to track time consumption.

In a typical day, there are numerous administrative tasks and assorted responsibilities assigned to a detective. These tasks and responsibilities consume the resource of time and should be budgeted for. For ease in computing, this formula requires a projection of this time for a typical workday.

Subtracting this time loss from the total worked (i.e., 8 hours) projects the amount of time a detective actually has in a given day to work assigned cases. Dividing this by the total hours worked (i.e., 8 hours) determines the percentage of the time allocated to assigned cases.

This worksheet will determine the actual number of days one should expect to receive from the average detective. This figure will determine the number of detectives required provided by the detective workload computation sheet.

Naturally these figures would be increased if all of the sections in investigations were added. This process does not address supervisory staffing requirements.

Results

This research reflects two mathematical formulas, both proven to be useful in the investigative budget process for personnel allocation. When surveyed, 95% of the Florida Sheriff's offices contacted did not use mathematical equations as part of their budget process for requesting additional detectives.

Also, it was found that there is a growing need in law enforcement for hard statistical data for requesting additional personnel in the investigative functions of law enforcement as well as the whole agency.

Most law enforcement agencies today request additional personnel positions through a budget process by declaring a need due to increased population, crime and a growing workload. This survey found the use of mathematical formulas rare among most Florida Sheriff's Offices except for a few mid-sized agencies.

Also found was a growing need for better justification, which this formula provides. Agencies such as the National Criminal Justice Reference Service, Southern Police Institute, Department of Police Studies, Police Abstract Listing Service and the Winnipeg Police Department, Canada, when surveyed, could not provide any prior research and thought this study to be of value.

Discussion

Being careful not to plagiarize the Pompano Beach Police Departments 1985 study, this current research into the ten year old study found it to be valuable with moderate changes to the statewide averages for time required to investigate certain crimes.

It is suggested that the 1985 statewide averages on time consumption be utilized as a minimum standard. The validity of utilizing the Pompano Beach formula is still viable for requesting additional personnel.

Lieutenant Elliott Gribble has served in a variety of positions in his 24-year law enforcement career with the St. Johns County, Florida Sheriff’s Office. He has been a patrol deputy, property crimes detective in the Investigations Division, Sergeant of property crimes. As the Lieutenant of Field Investigative Services, he is responsible for investigations of crimes against persons, crimes against property, and physical evidence. Trained in the science of fingerprint identification, he works part time in the Identification Section, and provides expert testimony in fingerprint examinations.

References

Ammann, E. P. (1990). Formula presented to IACP training class, Valencia Community College, Orlando, Florida. CN-1007, Police Manpower Allocation and Distribution.

Andrade, A. (1985). World police and paramilitary forces. In B. L. Ingram & T. P. Mauriello (Eds.). Police investigations handbook. (Chap. 5, p. 37). NY: Mathew Bender.

Commission of Accredited Law Enforcement Agencies. (1994). Allocation and distribution of personnel. National accredition manual (Chap. 16, p. 2).

Eck, J. (1983). Solving Crimes: The investigation of burglary and robbery (Police Executive Research Forum) In B. L. Ingram & T. P. Mauriello (Eds.). Police investigations handbook. (Chap. 1, p. 5). NY: Mathew Bender.

Gleizal, P. (1981). Police, law, and security in France: Questions of method and political strategy, 9 Int'l J. of the Soc. of Law 376-78 (Nov. 1981). In B. L. Ingram & T. P. Mauriello (Eds.). Police investigations handbook. (Chap. 5, p. 37). NY: Mathew Bender.

Johnson, P. (1979). Policing the urban underworld: The impact of crime on the development of the American police. In B. L. Ingram & T. P. Mauriello (Eds.). Police investigations handbook. (Chap. 5, p. 18). NY: Mathew Bender.

Klockars, J. (1985). The Idea of Police p.34-36. In idea of police (p.34-36). In B. L. Ingram & T. P. Mauriello (Eds.). Police investigations handbook. (Chap. 5, p. 7). NY: Mathew Bender.

Lindquist, B. S., O'Connell, P. & List, F. A. (1985). Pompano Beach police perform detective bureau manpower assessment. The Florida Police Chief. p. 57-69.

Smith, R. (1985). Policing Victorian London. Weston & Wells, Criminal investigation: basic perspectives 5 (2d ed. 1974). In B. L. Ingram & T. P. Mauriello (Eds.). Police investigations handbook. (Chap. 5, p. 6). NY: Mathew Bender.

Appendix A

Workload Computation Worksheet

Total hours per year (365 x 8) ..... ____

Subtract regular days off in hours ..... ____

Subtract sick time in hours ..... ____

Subtract holidays in hours ..... ____

Subtract vacations in hours ..... ____

Subtract training time in hours ..... ____

Subtract military leave in hours ..... ____

True available time per detective = ... ____

To determine the staffing requirements for detectives, perform the following mathematics

A. Determine number of hours required
(from detective workload computation sheet) ..... ____

B. Determine available time per detective, in hours
(from this worksheet) ..... ____

C. Divide value A by value B ..... ____

Value C is the required staffing of detectives based upon the managerial allocations set forth in the worksheets. Naturally these figures would be increased if figures for all of the sections in investigations were added. This process does not address supervisory staffing requirements.

Appendix B

Detective Workload Computation Sheet

A. Estimated number of assigned cases for fiscal year.....____

B. Average time (in hours) per assigned case .....____

C. Multiply A times B and for total hours worked .....____

(Value C is time required to process assigned case)

D. Establish the goal number of hours per day to allocate to working assigned cases. .....____

E. Determine percentage of time spent working assigned cases (i.e. value D divided by hours worked).....____

F. Divided E into 1.00 to determine multiplier .....____

G. Multiply value C by the multiplier .....____

Value G is the total number of detective hours you must budget for the agency.

In order to determine value D, you must make some managerial projections and assumptions.

Appendix C

Historical Needs Assessment

The formula used; A x B = C x D = E, divided by F = XX, divided by G = H, I - H = X, divided by Y = Z was adapted for investigative criteria.

A = Number of investigative cases assigned

B = Back-up factor (1.3 detectives assisting on case)

C = Adjusted cases

D = Time spent on cases (in minutes)

E = Total minutes on cases

F = Minutes in hours

G = Hours worked during day

H = Person days actually spent on cases

XX= Hours spent on cases

I = Persons days available to be spent on cases

X = Difference between H & I

Y = Conversion factor (person days divided by current number of detectives)

Z = Detectives (over or under)

This historical needs assessment formula still provides a good supportive means to allocate additional personnel.