

The Allocation of Personnel and the Investigative Divisions

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Abstract

In-Law enforcement, the general concern has always been whether an agency has allocated the appropriate personnel within the uniformed patrol division. However, this research looks at other personnel working within an agency's investigative division and how staffing occurs. In these investigative divisions, the primary focus is to look at and determine how allocating personnel is happening within certain sections/divisions within an agency (Homicide Section, Special Victims, Section, etc.). Unfortunately, there is minimal information and little research to date that addresses how agencies determine this type of allocation. Therefore, reviewing past methodologies and comparing and analyzing these current practices can help understand how investigative divisions allocate their personnel. Several law enforcement agencies, Sheriff's Offices, and Police Departments were interviewed and surveyed within this research.

Introduction

All law enforcement agencies have a dedicated investigative division with assigned law enforcement officers or deputies typically referred to as detectives or investigators. These detectives are assigned to investigate crimes committed against a person(s) such as aggravated assaults or batteries, sexual batteries, child abuse, elderly abuse, and robberies. In addition, they investigate property crimes such as vehicle and residential burglaries, auto thefts, and grand thefts. An investigative division needs to have the appropriate amount of dedicated personnel assigned to investigate the variety and complexity of crimes, which is essential to the community it serves. The investigative division can vary in size and composition depending on the size of an agency. For example, in the agency I am currently employed with, Hillsborough County Sheriff's Office, there are approximately 61 detectives assigned to the Criminal Investigations Division. Five sections make up the division. These sections include the Homicide, Special Victims Section, Traffic Homicide, Economic Crimes, and the Gunfire Response Investigations Team. Each unit has a specific amount of detectives assigned to investigate crimes that fall within their respective specialty.

Other investigative areas within the agency are the Special Investigations Division, which primarily investigates drug-related crimes, and the General Offense Sections, which investigate property crimes. Inside the investigative divisions, detectives' follow-up on assigned cases reported to law enforcement by a patrol officer/deputy. These follow-ups usually require a lengthier and more complex investigation. For instance, a patrol officer initiates a violent crime investigation. However, due to the lack of time to continue the investigation, these types of cases are typically forwarded to detectives to conduct follow-ups and bring them to a final disposition. A patrol officer may not solve the initial

issue in some situations because the officer may lack resources, investigative tools, and training to handle the investigation appropriately. For example, a patrol officer may respond to a call for service involving a sexual battery, also known as rape. During this type of call for assistance, a patrol officer ascertains basic investigative detail. For example, an officer will obtain the incidents' time and location. They will also obtain suspect information, conduct an initial interview with the victim, secure the incident for evidence collection, and provide medical treatment as needed. The patrol officer is solely engaged in this call, which causes the response time for other calls for service to be delayed. This type of investigation requires an exponential amount of time to investigate beyond the initial information obtained by a patrol officer/deputy. As a result, a detective would be assigned to the case as the primary investigator, allowing them to promptly conduct an in-depth and lengthy investigation into the alleged crime.

Law enforcement agencies have to adequately staff their personnel to keep up with the current pace of population growth and the technological advances affecting crime. The recent advancements in technology have shown an increase in crimes such as cyber fraud, phishing, internet crimes against children that typically require law enforcement investigators to follow up. With the emergence of cyber threats comes more advanced training for investigators and more dedicated personnel to manage the increased volume of casework, which requires a thorough investigation. The need for an agency to have the appropriate amount of investigative personnel can play a vital role in both case resolution and crime suppression. In some cases, investigative sections are understaffed. Therefore, investigative personnel maintain a large caseload causing them to be overworked, creating a stressful work environment. For reference, the average number of cases investigated within the Special Victims Section, within the Hillsborough County Sheriff's Office, is approximately 150 cases a month compared to those investigated by the General Offense Section, approximately 90 cases. The additional staffing of investigative personnel for any agency, as previously mentioned, will depend on its size. However, a jurisdiction needs to determine the proper distribution of personnel and the appropriate amount of human resources required to investigate cases.

Currently, research shows there are many formulas and methodologies presented or utilized to staff the patrol division of law enforcement. However, there are no formulas or allocation models formally presented to indicate how to allocate and manage personnel within the investigative division of an agency.

Research also suggests that agencies must first examine what criteria they will utilize to evaluate investigations and personnel before staffing an investigative division. These criteria may include the nature of the investigation, the investigators, case assignments, and workloads. By analyzing the criteria such as the one previously mentioned, administrators can develop the appropriate allocation of investigative personnel, which may justify additional staffing. Several resource materials such as articles, journals, internet findings, interviews, and previous studies on staffing allocation will be utilized and measured to evaluate staffing of the criminal investigative divisions.

This research looks into the different processes and formulas utilized to adequately staff and or increase investigative personnel in the investigative division, specifically the Criminal Investigations Division, within the Hillsborough County Sheriff's Office. In addition, the intended purpose of this research is to provide material that will support applying the most effective tool when staffing investigators within investigative divisions.

Providing an allocation or staffing model is vital to an agency. Applying a model will prepare investigators to be more effective and efficient (i.e., reduce caseloads, reduce

inactive case statuses, and produce higher solvability rates). This will let administrators request additional staffing in a more streamlined and validated manner.

Law enforcement must evaluate the number of investigative personnel needed to meet the demands of society. Most of the research I have obtained and reviewed is somewhat dated; however, this review compares different studies on investigative productivity and staffing needs. Therefore, by examining the most efficient and effective methodology or formula to staff an investigative division.

Literature Review

Little research has been conducted into the necessary or suitable amount of investigative personnel required to staff a criminal investigations division. As a result, the allocation of investigative personnel continues to take a minor role compared to the uniformed patrol division's staffing needs. However, this issue appears to be a common and challenging concern for larger-sized agencies, much like the current agency I work for, the Hillsborough County Sheriff's Office. As a result, agencies need to focus on the caseload produced and make decisions based on managing and balancing resources, specifically between the patrol and investigative divisions.

In many investigative divisions, one considers the solvability factors when assigning a case. The basis of these factors has some critical elements: the seriousness of the crime, whether the suspect is known versus unknown, whether or not the suspect's identity is confirmed or located, any valuable evidence that may produce a suspect, and any possible witnesses. Prioritizing a case with a higher solvability factor tends to be researched first. However, leaving those with a lower solvability factor to be worked on later. These cases will then eventually become inactive cases. Hence, having the appropriate number of investigators assigned to an investigative division is essential for each case investigated to achieve optimal resolution. Case solvability factors are just one of many aspects one can look at when determining how to staff an investigative division. With this in mind, it is necessary to look at past and current research to evaluate this staffing process.

First, I will compare how past and current studies determined and evaluated their research regarding how investigative personnel is staffed and allocated. The first study I reviewed was the report conducted in 1967 by the President's Commission on Law Enforcement and Administration of Justice [AOJ]: The Challenge of Crime in a Free Society. This study completed a report on the Los Angeles Police Department (LAPD), which addressed several factors surrounding the investigative practices within the department. This study did not necessarily discuss how many investigators a department should have staffed, but it did provide several factors to consider when determining an agency's investigative practices. The study indicated that if a patrol officer could not clear a case by an arrest, the clearance rate would depend on a detective's investigative findings. Ultimately, creating a heavier caseload for investigators and only allowing for a small percentage of their cases to be thoroughly investigated. This study stated that increasing investigative personnel would enable an investigator to conduct a broader range of searches for witnesses and suspects, increasing outcomes with potential suspects. The study also compared the arrest rates between patrol officers and investigators. It stated that "nine-tenths of arrests were made by the patrol officer rather than by detectives" (The President's Commission on Law Enforcement & AOJ, 1967, p.

97). It clearly stated that a higher percentage of case clearing investigations by patrol officers did not require an extensive follow-up. However, it did state that a "quarter of arrest by patrol" was due to the investigative leads conducted by detectives (The President's Commission on Law Enforcement & AOJ, 1967, p. 97). Thirty-six percent (36%) of the arrest made in the LAPD study were all made within one-half hour of the commission of the crime. This data suggested to the commission that a patrol officer's rapid response was significant. Furthermore, it is necessary to have enough officers with investigative knowledge and experience (commonly known as detectives) quickly respond to a scene. However, per the study, staffing is not the only issue that can hinder an effective investigation and covers other areas such as science and technology (The President's Commission on Law Enforcement & AOJ 1967, p.97).

A second study conducted was one completed by the RAND Corporation. "A two-year study based on the Criminal Investigation Process Volume I: Summary and Policy Implications" (this study compiled into three different volumes). This study, similar to the one conducted on LAPD, did not discuss the issues of staffing of investigators. However, it debated how police agencies managed investigations and assessed contributions of various investigations activities to overall police effectiveness. In addition, it found that the allocation of staffing between a patrol officer and that of an investigator did not show many differences when comparing arrest rates. Their findings suggested that an investigator's role was not a significant factor when investigating unsolved cases. A small percentage of solved cases came from actual investigative efforts. It also stated that an investigator's workload consisted of a small percentage of basic active investigations that were solvable compared to those considered unsolvable. An investigator spends most of their time on administrative work (report writing, time keeping, court preparation, etc.) versus the actual apprehension of a suspect. This study suggested that departments investigate efforts and resources could be reduced, thus increasing criminal apprehension. This study also encouraged agencies to concentrate on modifications in five different areas. These areas to be modified were the initial investigation, more responsibility by the initiating patrol officer. The second was case screening, which in other means is selecting cases with leads. The third was the managing and reviewing of a continuing investigation. The fourth was the relationship between police and the prosecutors concerning case prosecution. Last was the investigation monitoring system which evaluated the unit's effectiveness. (The Criminal Investigation Process). In 1975, according to the Rand Study, there has been no other research suggesting any other innovations to improve the effectiveness of investigative units.

According to the research, Allocation of Personnel: Investigations, conducted by William Prummell, he references Elliot Gribble, both of whom refer to the same study completed in 1985 by the planning and research department of the Pompano Beach Department. This study utilized case assignment criteria and the time needed to investigate cases (Prummell, cited in Gribble, 1996, Page 2). However, there was no confirmation to verify this study and its staffing model. The formula utilized in this study allocates how much time is required to investigate crime, allowing an agency to request additional investigative personnel. According to Gribble, the Pompano Beach Department conducted its research the same year as The Florida Chapter of Association of Police Planning and Research (APPRO). The research involved comparing a two-part formula that considered an investigator's available time versus time consumed to determine staffing needs (Gribble, 1996). Much like William Prummell's Research, nothing confirmed the existence of the APPRO nor this formula through them or the

Pompano Beach Department. However, per William Prummell, he stated that retired Chief William Liquori's formula (the one mentioned in this study) was developed by his staff years ago. Liquori was unaware of the one completed by the APPRO and did not know of their organization (Prunnel, n.d. p. 6). The formula provided by Chief William Liquori in 1988 appears to be utilized to date by the Altamonte Springs Department. In general, this two-part formula that the state research project compared was the investigative time available versus investigate time consumed (Gribble, 1996, p. 2). Per Gribble, this formula attained the actual work time and did not reflect the exact time spent for investigation and stated "that with the reluctance to increase funding, a more efficient method of determining staffing requirements was necessary" (Gribble, 1996, p 3). In Gribble's research, he refers to two mathematical formulas which, per Gribble, have both been "proven to be useful in the investigative budget process for personnel allocation" (Gribble, 1996, p. 5). The formulas provided by Gribble consist of the following criteria. A "Workload Computation Worksheet" was used to determine the staffing requirements for detectives by performing the following computation. The number of hours required is divided by the available time per detective in hours, which equals to the required staffing of detectives based on the managerial allocations described in the worksheets (Gribble, 1996, p.7). The second formula he provides is the "historical needs formula, which provides a good supportive means to allocate additional personnel" (Gribble, 1996, p.9). This formula incorporates time (hours/minutes worked on cases), the number of assigned cases, and the actual days spent on investigations.

During this research, another exciting formula I came across was one mentioned by James Brett in his administrative research paper in 2007. He refers to the Del Carmen Study, which looked into staffing allocation for criminal investigations (Brett, 2007, p.10). Unfortunately, just like the study on the Pompano Beach Department conducted by the APPRO, there was nothing to verify this study via any resource material (i.e., books, journals, and intranet search). Therefore, this formula did not necessarily cover how much staffing is needed and allocated within an investigative division. However, it did provide a procedure on the number of cases investigated per month in general. The formula took into account the following factors into the additional duties of an investigator: training, prosecution, administrative duties, and vacation/sick time (Brett, 2007, p.10). However, the formula calculated only the following: the hours per month, formulated by taking 40 hours/week, multiplying it by 52 weeks, dividing it by 12 months which equaled out to be 173.33 hours per month. Then multiply the 173.33 hours per month by the training, prosecution/processing time, and other administrative duties. Finally, divide that by the time allocated per case, equaling the number of cases that an investigator can investigate in a month. Per Brett, he stated that by "utilizing the formula provided by Del Carmen, you would be able to calculate the amount of time each investigation would take to investigate" (Brett, 2007, p.11). This research, like others, appears as though many agencies currently do not have an operating staffing model in place to assist with determining the amount of personnel needed to staff an investigative division.

Lastly, in a current study conducted in May of 2014, The Police Executive Research Forum (PERF) and the Justex Systems Inc. conducted a study of the operational staffing (patrol and investigations) of the Houston Police Department. The Houston Police Department Operating Staffing Model produced by Justex System Inc. developed an Allocation Model for Investigations (AMI) and an Allocation Model for Patrol (AMP). The AMI incorporated its model into the study within the HPD, which PERF conducted in 2013/2014 (Police Executive Research Forum [PERF] & Justex Systems,

Inc., 2014). According to Justex Systems, the President's Commission on Crime and Administrative Justice from 1967 and the study conducted by the RAND Corporation in 1975, to date, are two studies that are commonly known to have undertaken research regarding investigations and staffing of personnel. Per the Justex System, Inc., their way to achieving optimal staffing would be using a "deployment by analysis" (PERF & Justex Systems, Inc., 2014, p. 29) approach with the HPD. They also stated that using this type of analysis would integrate "staffing and productivity with crime and disorder prevention and critical incident response strategy". The AMI model also stated that within the HPD, this study provides a "quantified analysis of a department's investigative effort" (PERF & Justex Systems, Inc., 2014, p. 29). The study uses three essential points to help determine the levels of staffing of investigative personnel. These three points entailed the following fundamentals: First, it did not create an overall numerical model due to the different investigative variables within the units. Secondly, utilizing a starting point can be established, thus taking past and future workloads into consideration. Thirdly, this should calculate the new number of assigned cases per individual for each month.

Like most models, the AMI is "predicated upon a series of assumptions" (PERF & Justex Systems, Inc., 2014, p. 61). Simply stating that, this model may or may not have the correct answer for how many investigators an agency will require. The study also said the difficulty of determining how many investigators an agency should add comes down to quantifying the outcome of an investigation. AMI considers quantified as the "amount of additional investigative effort" (PERF & Justex Systems, Inc., 2014, p. 61). Allowing for an agency to quantify these additional efforts is to add more detectives with great diligence. The AMI is a tool that allows for an agency to understand why adding other personnel is needed and to see the need to conduct extensive investigations versus basic ones. The AMI Model categorizes cases related to investigative efforts rather than by classifying them just by the offense. This model created a 4x17 matrix as an investigative tool to help an agency comprehend the investigative efforts represented by each cell. The matrix used the horizontal row to categorize the status of a suspect identity (four categories of suspect identification). It used the vertical rows to classify offenses (17 offenses utilized in this study). The additional ten categories were for investigations without suspects. The model also grouped units by crimes and the average amount of time spent on a case. In 2013, HPD asked approximately 167 investigators to maintain a "time expanded log." As a result, from the information gained from HPD, the combination of the "time expanded log" and caseloads were used to obtain the annual number of cases investigated by offense and by suspect status. The AMI model implemented a 10% across the board increase in time spent for all of the crimes listed by HPD. The study provided the agency with several additional investigative personnel to effectively and adequately investigate cases with solvability factors. In summary, Justex System, Inc. recognized the need for other personnel to be added to HPD's investigative units. It stated that "every unit should be staffed such that all cases with leads receive at least some attention" (PERF & Justex Systems, Inc., 2014, p. 68).

Considering the above studies earlier mentioned and their models, some questions will still need to be factored in when considering the allocation model to implement with one's agency. One factor to consider is whether the listed studies would still be effective today in precisely determining the proper model for staffing an investigative division. Another essential factor to consider is the current staffing methods/formulas being implemented and practiced today, and whether those systems meet the needs of allocating the appropriate amount of investigative personnel in law enforcement today.

Methods

The purpose of this research paper was to identify if law enforcement agencies in Florida were utilizing any staffing models, formulas, or methodologies to help determine and evaluate how their investigative personnel were being allocated within the investigative divisions. For example, the Hillsborough County Sheriff's Office does not have a system to staff investigative personnel (also known as detectives).

In January of 2022, an email was sent to a total of 13 agencies within Florida asking them if they would participate in a survey. The agencies considered for the survey were similar in size and composition too that of Hillsborough County Sheriff's Office, specifically with the composition of sworn law enforcement personnel. These agencies were advised that the survey would ask questions about how their agency staffed their investigation divisions.

In February of 2022, Survey Planet was created and emailed to agencies that had agreed to participate in the survey. The data collected was gathered in conjunction with a phone interview and the survey. The supervisors in command over the investigative divisions were interviewed by phone. The phone interviews were conducted to confirm that the correct supervisors who oversaw the investigative divisions were interviewed. The interview and survey allowed for further explanation of the specific data captured in the survey allowed for the assessment process of how criminal investigators were assigned to investigative divisions.

The first question asked in the survey was whether or not their agency currently had an allocation model implemented within their investigative divisions. If an agency had an allocation model, they were asked what type was currently implemented (workload assessments, case assignments). If an agency did not implement an allocation model, they were asked what factors had they used to staff the investigative divisions. The survey also asked questions to help understand and gather the specific model or methodology an agency has used or implemented for staffing an investigative division. Participants were also asked specific questions on what they thought were some of the strengths and weaknesses of utilizing and allocating their personnel.

In addition, they were asked whether or not the systems currently in place met the appropriate amount of investigative personnel needed to investigate cases in law enforcement today. This survey was designed to collect feedback on what factors to consider if and when a staffing formula/methodology were to be implemented within the investigative divisions of the Hillsborough County Sheriff's Office.

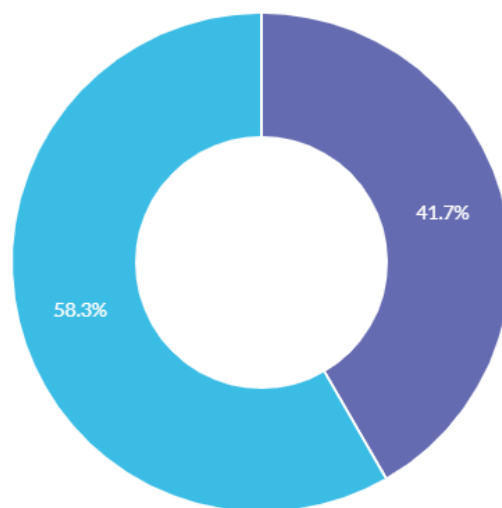
Results

During the research of how investigative personnel are allocated within the investigative division, I learned there was limited and outdated information concerning the necessary or suitable amount of investigative personnel required to staff and investigate crimes within a criminal investigations division. As part of this research a total of 13 law enforcement agencies (combination of Sheriff's Offices and Police Departments similar in size) were contacted via an introductory email (See Appendix A) which provided the purpose of the survey and were asked to participate with a phone interview and a 11 question survey (See Appendix B). I received a total of 13 responses in which the agencies advised they would be able to participate. Out of the 13 agencies, a total of 12

phone interviews were conducted and 12 surveys were sent out and 12 surveys were received. The phone interviews consisted of additional follow up questions to those asked within the survey. For a list of participating agencies and amount of sworn law enforcement personnel (See Appendix C).

The first question in this survey asked agencies if they currently had an allocation model implemented within their investigative divisions. If an agency had an allocation model they were asked to answer question two which asked what type of allocation model was implemented. If they did not have an allocation model they were to move on to the question three. All 12 respondents answered the question.

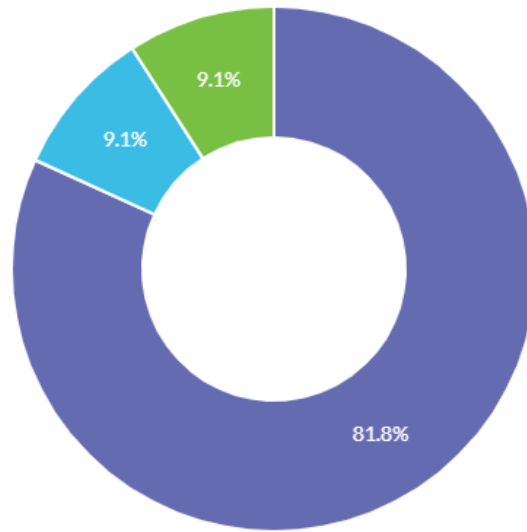
- 7 respondents (58.3%) stated that no they did not have an allocation model
- 5 respondents (41.7%) stated that yes they had an allocation model.



Choice	Total
Yes	5
No	7

The second question asked which staffing model best represents the methodology their agency is currently using. However, those agencies which advised they did not have an allocation still responded to the question even though they were asked to move on to question three. Eleven out of the 12 respondents answered the question.

- 9 respondents (81.8%) answered the staffing model which best represented their agency was based on workload assessments- the amount of cases being worked by each detective within a unit.
- 1 respondent (9.1%) answered the staffing model which best represented their agency was based on case clearance/screening of incoming cases.
- 1 respondent (9.1%) answered the staffing model which best represented their agency was based on case assignment-cases assigned by length of investigative time (Time available vs time consumed).
- 1 respondent did not answer the question.



Choice	Total
Workload Assessments- the amount of cases being worked by each detective within a unit.	9
Case clearance/screening of incoming cases.	1
Case assignment- cases assigned by length of investigative time (Time available vs time consumed).	1
Other	0

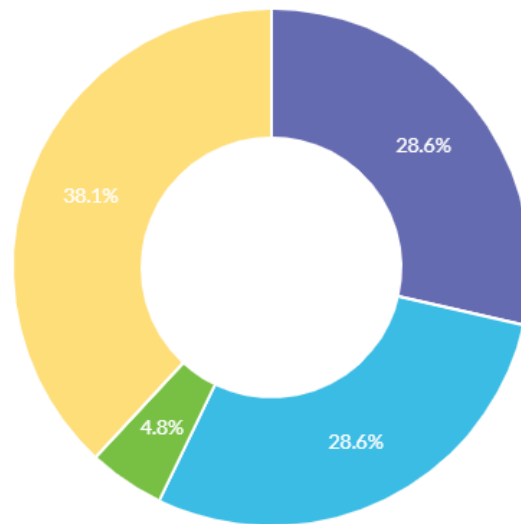
The third question asked what current factors (geographic size, population size, agency tenure, and other) their agency using to staff the investigative division. The question was a multiple-choice answer and all 12 respondents answered the question.

- 28.6% of respondents advised they factor in geographic size.
- 28.6% of respondents advised they factor in population size.
- 4.8% of respondents advised they factor in agency tenure.
- 38.1% of respondents advised they use other factors to staff their investigative divisions.

Below is a more specific breakdown of the multiple choice options selected by the respondents.

- 1 respondent answered by agency tenure and other: workload/interview process/supervisory reviews
- 1 respondent answered by area size geographic area and other: amount of cases.
- 2 respondents answered by geographic area and population size.
- 1 respondent answered by geographic area, population size, and crime trends.
- 1 respondent answered by population size.
- 1 respondent answered by population size and other: investigations by type.

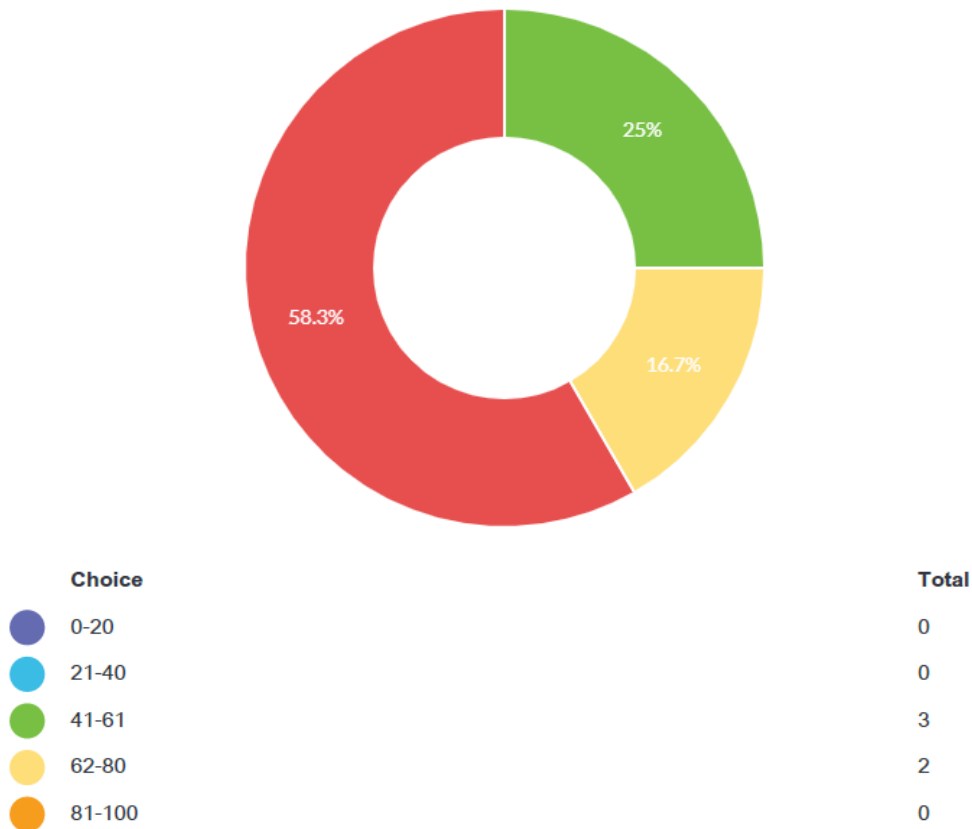
- 1 respondent answered by population size and other: number of cases received.
- 1 respondent answered other: caseload.
- 3 respondents answered other: For staffing selection we utilize a Transfer Review Board Method as well as a Resume Review Process, the other advised by caseload, and there was no rhyme or reason as to how they staff the investigative division.



Choice	Total
Geographic area	6
Population size	6
Agency tenure	1
Other	8

The fourth question asked how many personnel (Sworn Law Enforcement Detectives) are currently assigned to the investigative Division (For example: The Criminal Investigations Division). All 12 respondents answered the question.

- 3 (25%) respondents answered between 41-61.
- 2 (16.7%) respondents answered between 62-80.
- 7 (58.3%) respondents answered between 101- and above.



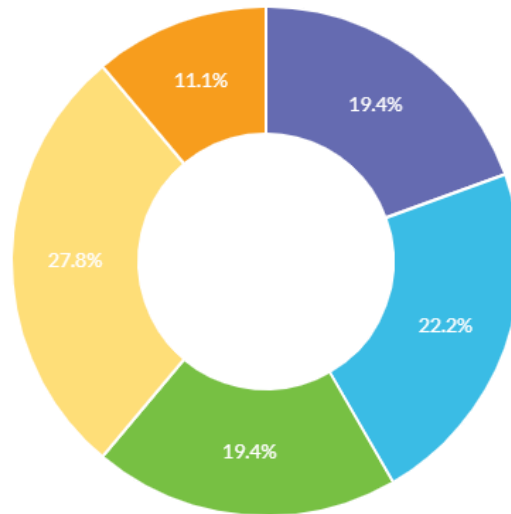
The fifth question asked how are cases being assigned within the investigative units. The question was a multiple-choice answer and all 12 respondents answered the question.

- 19.4% of respondents advised they assign cases by solvability factors.
- 22.2 % of respondents advised they assign by geographic area.
- 19.4% of respondents advised they assign cases by detective knowledge.
- 27.8 % of respondents advised they assign cases by caseload.
- 11.1% of respondents answered other on how they assign cases within the investigative units.

Below is a more specific breakdown of the multiple-choice options selected by the respondents.

- 1 respondent answered by caseload.
- 5 respondents answered by solvability factors, geographic area, detective knowledge/experience, and caseload.
- 1 respondent answered by solvability factors, geographic area, and caseload.
- 1 respondents answered by geographic area and caseload.
- 1 respondents answered by geographic area, detective knowledge/experience, and caseload.

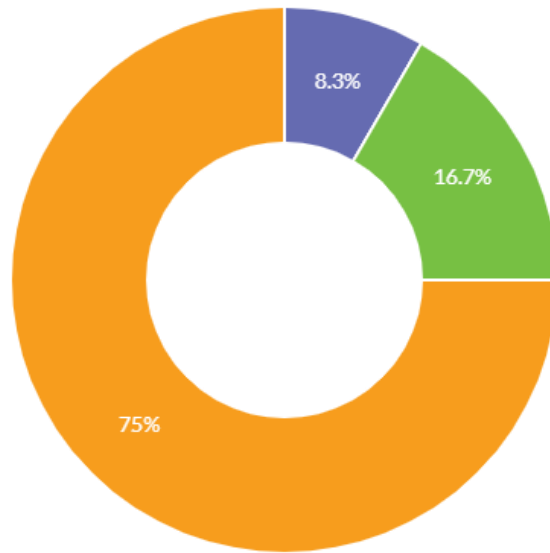
- 1 respondent answered by solvability factors, detective knowledge/experience, caseload, and other: cases also assigned by investigative specialty and crime types.
- 2 respondents answered by other: In this unit cases are assigned (Violent Crimes includes Robbery, Homicide, and Gangs), differs with each unit, some geographical, others are on-call rotation. Solvability factors, geographic area, detective knowledge/experience, and caseload.



Choice	Total
Solvability factors	7
Geographic area	8
Detective knowledge/experience	7
Caseload	10
Other	4

The sixth question asked how many cases are being assigned to the investigative division as whole on a monthly basis. All 12 respondents answered the question.

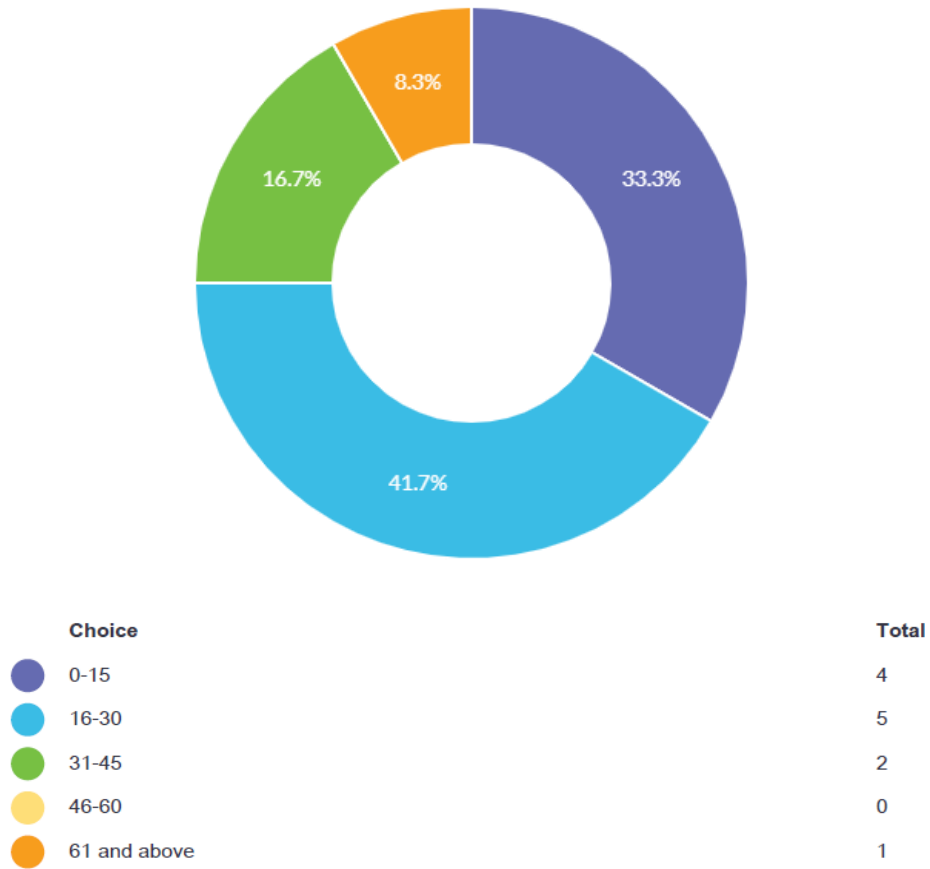
- 1 (8.3%) respondent answered between 0-25 (*After the survey was completed the respondent advised they misread the above question and the answer should have been above 100 not between 0-25).
- 2 (16.7%) respondents answered between 51-75.
- 9 (75%) respondents answered between 101 and above.



Choice	Total
0-25	1
26-50	0
51-75	2
76-100	0
101 and above	9

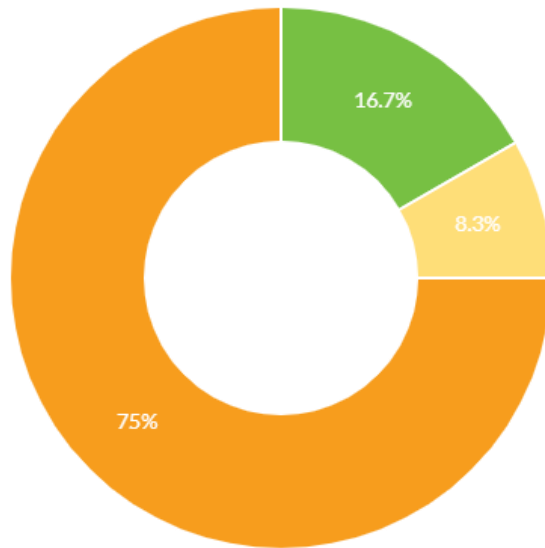
The seventh question asked what is the average amount of cases currently assigned to an individual detective on a monthly basis. All 12 respondents answered the question.

- 4 (33.3%) respondents answered between 0-15.
- 5 (41.7%) respondents answered between 16-30.
- 2 (16.7%) respondents answered between 31-45.
- 1 (8.3%) respondent answered between 61 and above.



The eighth question asked what is the average amount of time currently consumed to complete each individual case assignment (from time assigned to case closure). All 12 respondents answered the question.

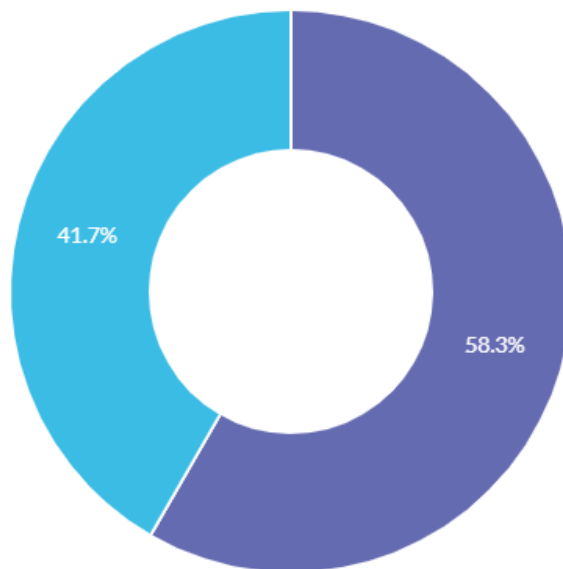
- 2 (16.7%) respondents answered 3 hours.
- 1 (8.3%) respondent answered 4 hours.
- 9 (75%) respondents answered 5 hours and above.



Choice	Total
1 hour	0
2 hours	0
3 hours	2
4 hours	1
5 hours and above	9

The ninth question asked if there are there any staffing shortages of detectives within the division. All 12 respondents answered the question.

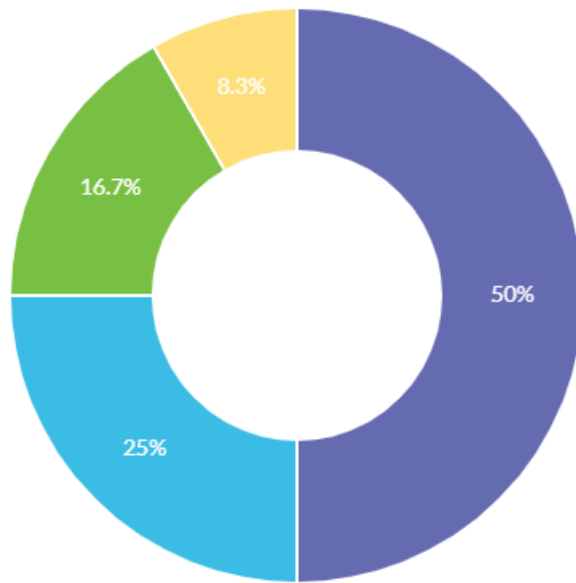
- 7 (58.3%) respondents answered yes.
- 5 (41.7%) respondents answered no.



Choice	Total
Yes	7
No	5

The tenth question asked if so (referring to question nine) how many positions are not currently staffed. All 12 respondents answered the question. However, those agencies which advised there were no staffing shortages still responded to the question.

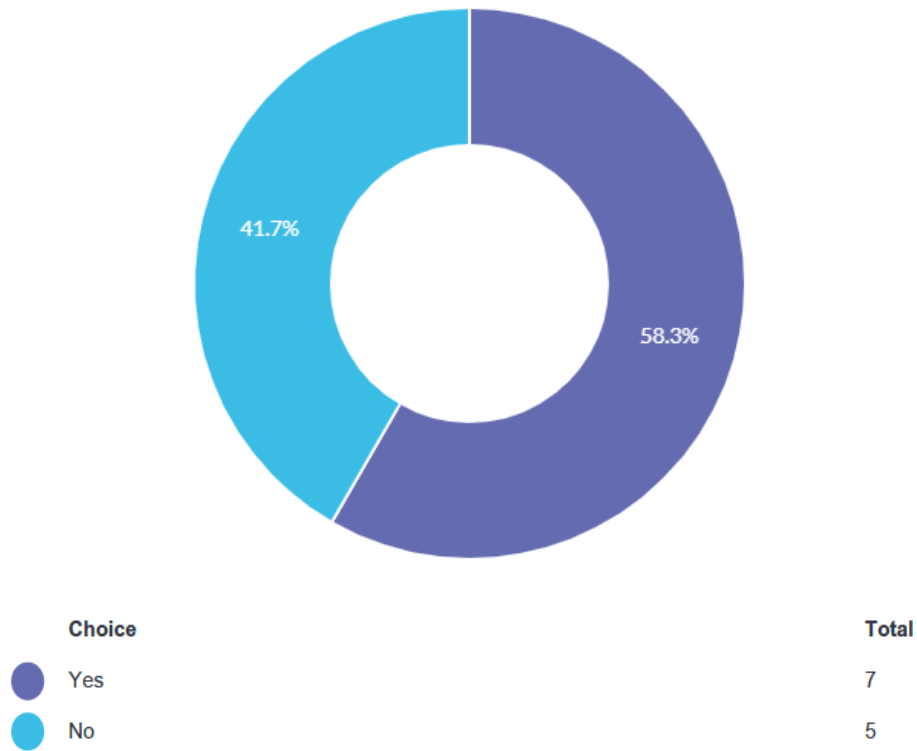
- 6 (50%) respondents answered between 1-3.
- 3 (25%) respondents answered between 4-7.
- 2 (16.7%) respondents answered between 8-10.
- 1 (8.3%) respondent answered between 11 or more.



Choice	Total
1-3	6
4-7	3
8-10	2
10 or more	1

The eleventh question asked is your current staffing model meeting the staffing needs of your agency. All 12 respondents answered the question.

- 7 (58.3%) respondents answered yes.
- 5 (41.7%) respondents answered no.



Discussion

Before this research, I began inquiring whether or not there was a standard formula or method that existed as to how the staffing /allocation of the investigative divisions within my agency, the Hillsborough County Sheriff's Office, and other law enforcement agencies occurs. Unfortunately, within my agency, I realized there is no current standard practice for allocating investigative personnel within the investigative divisions.

This research, from both the phone interview and survey, supports that most agencies are not currently using a standard formula or model as mentioned in the reviewed literature. The literature within this research discussed several procedures, such as those used within the Del Carmen Study, which did not necessarily cover staffing and or allocation within an investigative division; however, it provided a procedure on the number of cases that an investigator should investigate per month. Additional literature suggested using the AMI Model, which categorizes issues related to investigative efforts rather than classifying them just by the offense. Research also suggests agencies utilize several factors to allocate personnel in their investigative divisions, and they are not using formulas like those currently used to staff the patrol division. Also, within the reviewed

literature, there was no specification allocation model geared towards allocating investigative personnel, which came to light within this research. Additionally, it was challenging to find information regarding staffing allocations and the investigative divisions, as the research on this subject matter was limited and outdated.

I spoke with the investigative supervisors and or commanders from the listed agencies; Brevard County Sheriff's Office, Broward County Sheriff's Office, Jacksonville Sheriff's Office, Miami Police Department, Orange County Sheriff's Office, Orlando Police Department, Palm Beach Sheriff's Office, Pasco County Sheriff's Office, Pinellas County Sheriff's Office, Polk County Sheriff's Office, St. Petersburg Police Department, and the Tampa Police Department. As anticipated, each agency advised they did not use a specific formula to allocate their investigative division. One exception was for one agency that reported they used a third party, a Research and Development Agency, to look into the allocation of their personnel within their investigation division.

As projected, I found that each agency manages and allocates its investigative functions differently; however, a common overall theme was how they staff their investigative division. Many of these agencies are otherwise using similar staffing models by implementing a combination of several factors that include but are not limited to workload assessments, case clearance/screening of incoming cases, or case assignment. In addition, agencies are also considering other factors such as the geography of an area, the size of a population, and utilizing different methods such as review boards to allocate personnel. The twelve phone interviews and surveys identified the most common theme that resulted in agencies currently administering their staffing based on yearly workload assessments. In addition, they compare the number of personnel to the number of cases needing an investigation. By comparing these two factors, most agencies advised this assists them with determining if they have the appropriate amount of personnel investigating the number of reported crimes. However, other agencies suggested there was no specific rhyme or reason for allocating the amount of personnel in their investigative division.

On the other hand, some agencies have had no change in personnel in several years, while others are constantly adjusting /reallocating their personnel from one section to another based on their yearly workload assessments. For example, suppose one section's caseload has had a decrease in crimes. If they look at another section's cases that may have increased, they will reallocate personnel accordingly, and this is a constant re-allocation conducted yearly.

Regarding how many cases need an investigation, it was interesting that some Property Crime Units have a higher caseload than Major Crimes Units. Several factors played a significant role in this: higher crime areas depending on the agency's population, geographic location, community policing/law enforcement presence, etc.). In addition, other factors such as how an agency distributes its investigations can significantly impact a detective's caseload. For example, some agencies may have a property detective investigate a robbery of a person. In contrast, another agency may have a dedicated unit such as a task force to investigate only robbery cases. So when it comes to an investigator's caseload, there can be a considerable disparity between agencies and the number of individual cases assigned to each detective and the section assignment. Therefore, an allocation model and or staffing model is imperative and vital to ensure cases get thoroughly investigated, requiring the appropriate number of personnel to be assigned to investigate these cases with a manageable caseload.

Recommendations

This research aims to assist law enforcement agencies, more specifically the Hillsborough County Sheriff's Office, with determining the appropriate number of criminal investigators assigned within the investigative divisions. There are many different ways in which an agency can account for determining the staffing needs of an investigative division. One way is by evaluating an agency's standards. Below are some ways to establish the appropriate allocation of personnel within the investigative divisions to fulfill job requirements.

1. Allowing administrators to have an in-depth look and compare several case assignment factors can allow for a more accomplished purpose of distributing investigative resources within an agency. Some elements are an investigator's caseload/workload, solvability factors of a case, investigative time used for each investigation, and the complexity of inquiry between the different investigative divisions. (For example: Currently, a General Offense Section Detective has 10-12 cases a month. Each section has ten assigned detectives, while the Special Victims Section Detective has a workload of 30-50 cases a month with 15 assigned detectives).
2. Find an equal staffing distribution to allocate between investigative sections by conducting yearly workload assessments. (Review and compare cases being investigated year to year).
3. Using a third-party Research and Development Agency to assist with and develop more accurate staffing of investigators/detectives.
4. Employ any one of the listed formulas (See Appendix D, E, and F) as cited in this research to show the need for additional personnel.

Captain Mayra Rivera has been in law enforcement for 17 years with the Hillsborough County Sheriff's Office. She is currently the Deputy Division Commander for the Criminal Investigations Division. She has served as a Deputy in Patrol Services and as a Detective in the Special Investigations Division. Before her current position, Captain Rivera held supervisory roles in Patrol District III, to include the FTO squad, Street Crimes Unit, and the General Offense & Intelligence Unit. She was also the Lieutenant of the Criminal Investigations Division. Captain Rivera received a Bachelor's Degree in Criminology from the University of South Florida.

References

- Corporate Author President's Commission on Law Enforcement and Administration of Justice Address Washington. (n.d.). *Challenge of crime in a free society*. Office of Justice Programs, U.S. Department of Justice. Retrieved November 6, 2021, from <https://www.ojp.gov/ncjrs/virtual-library/abstracts/challenge-crime-free-society>.
- Brett, J. (2007, January). *Manpower allocation for criminal investigations*. The Bill Blackwood Law Enforcement Management Institute of Texas. Retrieved November 5, 2021, from <https://shsuir.tdl.org/bitstream/handle/20.500.11875/1559/1138.pdf?sequence=1>
- Greenwood, P. W. (1979, January 1). *The Rand criminal investigation study: It's findings and impact to date*. RAND Corporation. Retrieved November 5, 2021, from <https://www.rand.org/pubs/papers/P6352.html>
- Greenwood, P., & Petersilia, J. (1975). *The criminal investigation process: Volume 1: Summary and policy implications*. The Rand Corporation.
- Gribble, E. A. (1996, August). *Allocation of personnel: Methodology for required staffing of detectives*. Florida Criminal Justice Executive Institute Published Papers. Retrieved November 6, 2021, from <https://www.fdle.state.fl.us/FCJIEI/Programs/SLP/Documents/Full-Text/Gribble.aspx>
- Police Executive Research Forum and Justex Systems, Inc. (2014, May). *Operational staffing model - Houston Police Department*. Retrieved November 6, 2021, from https://www.houstontx.gov/hpd_staffing_report-2014may.pdf
- Prummell, W. (n.d.). *Allocation of personnel: Investigations*. Florida Criminal Justice Executive Institute Published Papers. Retrieved from <https://www.fdle.state.fl.us/FCJIEI/Programs/SLP/Documents/Full-Text/prummell-bill-final-paper.aspx>.
- Wilson, J. M., & Weiss, A. (2014). Police staffing and managing workload demand: A critical assessment of existing allocation practices. *Policing: A Journal of Policy and Practices*, 8(2). Retrieved November 6, 2021, from <https://static1.squarespace.com/static/5464ec49e4b0694922219f87/t/546b8a5fe4b02c25d051bfc8/1416333919892/Policing-2014-wilson-police-pau002.pdf>.

Appendix A

Introductory Sample Email:

Good morning Major William Cook,

My name is Lieutenant Mayra Negron-Matias, from the Hillsborough County Sheriff's Office, and I obtained your contact information via the Miami Police Department website. I am currently attending a Senior Leadership course at FDLE in Tallahassee Florida and in conjunction to this course I am working on a survey. Within in this survey, I am researching to see how agencies, similar to those in size to the Hillsborough County Sheriff's Office, are currently allocating/staffing their investigative (detective) divisions. This survey is part of a research project in which I am proposing to implement a staffing model within my current agency. Your participation will consist of a phone interview in conjunction with a survey which will be sent via email. I am looking to set up an interview with you via phone if possible. Please let me know what day/time works best for you and or if you are able to participate in this interview/survey. Your assistance and time in this matter is greatly appreciated. I can be reached at the below number or my personal cell 813-***-****. Thank you.

Respectfully,

Lieutenant Mayra Negron-Matias

Follow up sample email reference Survey:

Good evening Major Cook,

Thank you again for taking the time to speak to me in regards to my research paper regarding the Allocation of Personnel and the Investigative Division. Your time was greatly appreciated and very helpful towards my research findings. As mentioned during our phone interview the second part consists a short survey. **Below is the link to access this survey.** It is only 11 questions and your time in completing this survey is also very much appreciated. Thank you again for everything and stay safe out there.

<https://s.surveyplanet.com/92ptz7qd>

Appendix B

The Allocation of Personnel and the Investigative Divisions Survey

Most law enforcement agencies currently have an allocation model when staffing the Patrol Division; however, no formulas or allocation models have been formally presented to indicate how to allocate and manage personnel within the investigative division of an agency. Within in this survey, I am researching to see how agencies, similar to those in size to the Hillsborough County Sheriff's Office, are currently allocating/staffing their investigative (detective) divisions. This survey is part of a research project in which I am proposing to implement a staffing model within my current agency (The Hillsborough County Sheriff's Office). This following survey questions will be conducted in conjunction with a phone interview.

1. Do you currently have an allocation model implemented for the investigative Division in your agency?
 - Yes (If yes, move to question 2)
 - No (If No, move to question 3)

2. Which staffing model best represents the methodology your agency is currently using?
 - Workload Assessments- the amount of cases being worked by each detective within a unit.
 - Case clearance/screening of incoming cases.
 - Case assignment- cases assigned by length of investigative time (Time available vs time consumed).
 - Other _____

3. What current factors is your agency using to staff the investigative division? (Check all that apply)
 - Geographic area
 - Population size
 - Agency tenure
 - Other _____

4. How many personnel (Sworn Law Enforcement Detectives) are currently assigned to the investigative Division (For Example: The Criminal Investigations Division)?
 - 0-20
 - 21-40
 - 41-61
 - 62-80
 - 81-100
 - 101 and above

5. How are cases being assigned within the investigative units? (Check all that apply)
 - Solvability factors
 - Geographic area
 - Detective knowledge/experience
 - Caseload
 - Other _____

6. How many cases are being assigned to the investigative division as whole on a monthly basis?
 - 0-25
 - 26-50
 - 51-75
 - 75-100
 - 101 and above

7. What is the average amount of cases currently assigned to an individual detective on a monthly basis?
 - 0-15
 - 16-30
 - 31-45
 - 46-60
 - 61 and above

8. What is the average amount of time currently consumed to complete each individual case assignment (from time assigned to case closure)?
 - 1 hour
 - 2 hours
 - 3 hours
 - 4 hours
 - 5 hours and above

9. Are there any staffing shortages of detectives within the division?
 - Yes
 - No

10. If so how many positions are not currently staffed?
 - 1-3
 - 4-7
 - 8-10
 - 11 or more

11. Is your current staffing model meeting the staffing needs of your agency?
 - Yes
 - No

Appendix C

Agency	Sworn # of Law Enforcement Officers
Brevard County Sheriff's Office	540
Broward County Sheriff's Office	1445
Jacksonville Sheriff's Office	1825
Miami Dade Police Department (Unable to Interview)	3096
Miami Police Department	1346
Orange County Sheriff's Office	1605
Orlando Police Department	867
Palm Beach County Sheriff's Office	1555
Pasco County Sheriff's Office	552
Pinellas County Sheriff's Office	729
St. Petersburg Police Department	575
Tampa Police Department	1043
*Hillsborough County Sheriff's Office	1220

Appendix D

Assessment needs formulas cited by E. Gribble and introduced by APPRO:

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.

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.

Historical Needs Assessment

The formula used; $A \times B = C \times D = E$, 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.

Appendix E

Formulas as cited by W. Prummell and developed by Chief William Liquori:

Criminal Investigations Staffing Formula (Explained)

A. Estimated assigned cases for fiscal year _____

This is the estimated number of assigned cases handled by the detective division during the fiscal year being evaluated. This information comes from Criminal Investigations Division computer systems.

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

This is the average time spent investigating an assigned case. This information is identified through the study.

C. Hours spent on assigned cases (multiply A x B) _____

When value A is multiplied by value B, we get the estimated total time encumbered by the Criminal Investigations Division investigating assigned cases.

D. Allocation of time factor X 1.60

(62.5% on cases, 37.5% on administrative duties)

This factor is determined by management and reflects their desired allocation of man hours. In this case, detectives are expected to be actively working assigned cases 62.5% of their shift. It is estimated that 38.5% of the shift is consumed doing administrative tasks (meal breaks, meetings, roll call, vehicle maintenance, etc.). The allocation of time factor varies depending on the percentages.

E. Minimum man hours required for staffing (multiply C x D) _____

By multiplying value C by D, we arrive at the minimum man hours required to accomplish our goal.

F. Number of work days per year _____

This is the number of workdays in the Division per year.

G. Average Daily workload in hours (E divided by F) _____

By dividing value E by value F, we arrive at the number of man hours required each workday.

H. Number of work hours per shift _____

This is the number of hours each shift works during each workday.

I. Number of work units needed per day (G divided by H) _____

By dividing value G by value H, we arrive at the number of work units needed to staff the Detective Division.

Criminal Investigations Division Availability Worksheet (Explained)

This worksheet will determine the actual number of days you should expect to receive from an average employee. This figure will help determine the number of employees you need to hire to staff the required work units as determined on the Criminal Investigations Division Workload Computation Worksheet.

- The first thing computed is the number of hours an average employee works during the year.

Total hours per year (365 X hours in workday) _____

This is the total number of hours an employee could work in one year without any time off.

Subtract the following in hours:

Regular days off _____

Paid leave (sick, vacation, etc.) _____

Holidays off _____

Other leave (wellness, military, training, etc.) _____

Total _____

Available hours worked per employee _____

This is the actual number of hours (on average) an employee is available to work.

- Now the "availability factor" is computed by dividing the total number of hours needed to staff the required work units by the available hours worked per employee. The "availability factor" represents how many employees are needed to staff one work unit.

Number of hours required for one work unit _____

Number of available hours worked per employee (from above) _____

Employee availability factor _____

The employee availability factor is computed by dividing the number of hours required for one work unit by the number of available hours worked per employee. Again, this tells us how many employees are needed to staff one work unit.

- Now we determine the total number of employees needed to staff the Division. Data from the Criminal Investigations Staffing Formula is used for this computation.

Work units needed per day (Value I from CID Staffing Formula) _____

Employee availability factor (from above) _____

Number of employees needed for staffing _____

By multiplying the total number of work units needed each day by the employee availability factor, we determine the total number of employees needed to staff the Division.

Appendix F

The Del Carmen Formula as cited by James Brett in his Administrative Research:

Looking at the average time per month that an investigator is available for investigation by using the following formula:

40 hours/week x 52 weeks ÷ 12 months = 173.33 hours per month

$173.33[(.9tr) (.95p) (.9a) (.8pr)] = nc$

xt

tr = Training @ 10%

p = Prosecution @ 5%

a = Administrative / other duties @ 10%

pr = processing @ 20%

xt = Time allotted per case

nc = Number of cases that can be investigated in a month