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An analysis of the research methods used in select peer-reviewed law enforcement journals, 2010 to 2014

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AN ANALYSIS OF THE RESEARCH METHODS USED IN SELECT PEER-REVIEWED LAW ENFORCEMENT JOURNALS, 2010 TO 2014

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ABSTRACT

This study provided a descriptive analysis of five peer-reviewed journals related to various law enforcement topics within a five-year period, 2010- 2014. It determined the type of research methodology that was applied and specified the authors' characteristics of sex and role/function for all research related articles selected from the five peer-reviewed journals published during this time period. The five journals used in this study were *International Journal of Police Science and Management, The Official Journal of the Society for Police Criminal Psychology, Police Practice and Research, Policing and Society, and Police Quarterly.* This descriptive study provides practitioners, academicians, and other invested entities with data in formulating decisions related to future research needs in the field of law enforcement.

CHAPTER 1

INTRODUCTION

As with other professions, the field of law enforcement has evolved from the duties and responsibilities of the night watchmen, making their way about the village in search of unhinged doors, policing inebriated neighbors, and maintaining a sense of law and order for the populace, to assuming additional roles and specialized functions related to the needs and demands of modern society. “Notable changes to police in the U.S. since the 1990s include the expansion of police forces, stronger accountability measures of command staff, the adoption of crime analytics, and the aggressive enforcement of misdemeanor and traffic laws” (MacDonald, Fagan, & Geller, 2016). In addition, the ever-changing threats posed by criminal enterprises have become increasingly complex. Law enforcement professionals can no longer afford to rely on personal experiences and hunches to develop courses of action to combat these challenges. With an increased focus on accountability, today’s law enforcement professionals are required to formulate strategies and tactics based on academic, scientific, and legal research (United States Department of Justice, n.d.).

In the past two decades we have witnessed the development of several new national and international peer-reviewed journals related to law enforcement professionals. This rapidly expanding base of knowledge and information for the policing profession has grown in scope and complexity in an effort to develop effective and accountable policing practices. Law enforcement administrators and leaders of international, national, state, regional, and local agencies are increasingly reliant on scientific data-based journals for developing enforcement policies, tactics, and best practices.

Evolution of Professional Policing

In the mid-19th century, Sir Robert Peel, known as the father of modern policing, promoted nine basic principles of law enforcement. These principles, based on Peel's experiences and knowledge, were among the first steps in the development of professional law enforcement practices. These principles represented a basic foundation to guide law enforcement efforts. The nine principles are as follows:

1. The basic mission for which police exist is to prevent crime and disorder as an alternative to the repression of crime and disorder by military force and severity of legal punishment.
2. The ability of the police to perform their duties is dependent upon public approval of police existence, actions, behavior, and the ability of the police to secure and maintain public respect.
3. The police must secure the willing cooperation of the public in voluntary observance of the law to be able to secure and maintain public respect.
4. The degree of cooperation of the public that can be secured diminishes, proportionately, to the necessity for the use of physical force and compulsion in achieving police objectives.
5. The police seek and preserve public favor, not by catering to public opinion, but by constantly demonstrating absolutely impartial service to the law, in complete independence of policy, and without regard to the justice or injustice of the substance of individual laws; by ready offering of individual service and friendship to all members of society without regard to their race or social standing; by ready exercise of courtesy and friendly good humor; and by ready offering of individual sacrifice in protecting and preserving life.

6. The police should use physical force to the extent necessary to secure observance of the law or to restore order only when the exercise of persuasion, advice, and warning is found to be insufficient to achieve police objectives; and police should use only the minimum degree of physical force which is necessary on any particular occasion for achieving a police objective.
7. The police at all times should maintain a relationship with the public that gives reality to the historic tradition that the police are the public and the public are the police; the police are the only members of the public who are paid to give full-time attention to duties which are incumbent on every citizen in the intent of the community welfare.
8. The police should always direct their actions toward their functions and never appear to usurp the powers of the judiciary by avenging individuals or the state, or authoritatively judging guilt or punishing the guilty.
9. The test of police efficiency is the absence of crime and disorder, not the visible evidence of police action in dealing with them (Peel, 1829).

During the period since Peel published his principles, the United States has witnessed significant societal changes and trends. In the early 20th century, the substantial growth and influence of organized crime became a major issue for law enforcement agencies. Vast expenditures of governmental resources were made in an effort to curtail these threats (Police Executive Research Forum, 2014). The establishment and development of the FBI lab in the early part of the 20th century was an initial and vital effort in confronting organized crime. Through the application of scientific methods and analysis, crucial tools to assist in criminal investigations and prosecutions were systematically developed (Fox, 2017). More recently, these

methods have assisted in the review of wrongfully convicted persons and have aided several individuals in gaining their freedom from incarceration.

In the later part of this time period, civil disturbances such as rioting, militant gang activities, mass shootings, narcotic trafficking, etc., have confronted the field of law enforcement. These ultra-intensive and dangerous situations have challenged law enforcement to develop new tactical strategies based on structured research and analysis (Klinger, 2008). An initial example of the use of structured research and analysis was the Los Angeles Police Department's creation of the first Special Weapons and Tactics (SWAT) unit (Los Angeles Police Foundation, 2018). The knowledge and skills acquired from this initiative were shared with other law enforcement agencies. By sharing this form of information, law enforcement administrators and policy makers gained a new situational awareness for addressing the ever-changing landscape of criminal initiatives and societal issues.

The attack on the New York World Trade Center on September 11, 2001, further highlighted the importance of research-based initiatives in addressing evolving criminal challenges. After this horrific event, law enforcement agencies experienced an increased concentration of resources to counter terrorism. A major facet of counter-terrorism operations requires the sharing of intelligence between law enforcement agencies, namely within Federal/State Fusion Centers. "Fusion centers play an important role in countering violent extremism and protecting local communities from violent crime through their daily operations, including gathering, analyzing, and sharing threat information" (United States Department of Justice, 2012). In addition, with increasing worldwide terroristic actions such as cyber-attacks on the technological infrastructure of governmental and private institutions, human trafficking, and

narcotic distribution, law enforcement must continue to develop state-of-the-art surveillance methods, based on experience and knowledge, to counter these threats (Marx, 2006).

Significance of Study

Law enforcement must not only protect citizens from the criminals, but also enhance the overall quality of life for citizens within its community through research-based best practices. Professional law enforcement practitioners and leaders are increasingly embracing the need to base their operations on scientific research through articles published in peer-reviewed and refereed journals. These journals have become an excellent resource for professionals to share their research, findings, and conclusions with other professionals within their field. These journals are scrutinized for accuracy, topic currency, and originality by editorial review boards and panels of experts from within the field.

Given the rigorous publishing standards of refereed journals, the quality of information provided promotes research-based decision making. The standards further provide a basis for peer-review and accountability for accepted outcome practices. The increased utilization of peer-reviewed research provided by these journals merits further examination of the authors' academic standing and the research methodology applied. Academic standing is a major indicator of an author's experience and credibility. An author's chosen method of research assists in determining the scope of the study and subsequent findings. The data from this study will provide academicians and practitioners who rely on peer-reviewed literature a descriptive snapshot of what methods of research are being conducted related to law enforcement issues and of the role/function of the authors conducting these studies.

Statement of Problem

The field of law enforcement is becoming increasingly dependent on peer-reviewed research to form systemic strategies to address the evolution of criminal challenges. Limited resources and increased accountability of performed duties demand strategic interventions. Professional peer-reviewed research journals focused toward law enforcement professionals at all levels have become a key source of this information (Rodriguez, 2016).

Articles submitted to scholarly journals are based on accepted methods of review. Accepted research methods such as qualitative, quantitative, and mixed methods are the foundations of such studies and the initial step in the formulation of best practices. Qualitative research is the process of utilizing emerging questions and data typically collected in the participant's setting; data analysis inductively builds from particulars to general themes, and the researcher interprets the meaning of the data (Creswell, 2014). Quantitative research is the approach for testing objective theories by examining the relationship between dependent and independent variables. These variables in turn can be measured and analyzed using statistical procedures (Creswell, 2014). Lastly, mixed methods research is an approach to the inquiry utilizing both quantitative and qualitative data, combining the two forms of data and using distinct designs that may involve philosophical assumptions and theoretical frameworks (Creswell, 2014).

Although the numbers of peer-reviewed law enforcement publications have increased, no systematic assessment of the personal and professional characteristics of the authors submitting these studies can be found. Unanswered questions abound. For example, who are the researchers and what are their qualifications? What research methodologies are being used by researchers to develop the conclusions and strategies for use by law enforcement professionals? Meanwhile, the

complexity of criminal initiatives continues to increase. Political and public scrutiny of policing practices continues to surge. Peer-reviewed journals targeting law enforcement leaders at all levels in addressing these factors are a critical knowledge base. This knowledge base assists in informative decision making on the part of these leaders.

Purpose

The purpose of this study was to provide a descriptive analysis of five peer-reviewed journals related to various law enforcement topics within a five-year period, 2010- 2014. The researcher determined the type of research methodology that was applied and specified the authors' characteristics of sex and role/function for all research related articles selected from the five peer-reviewed journals published during this time period. The five journals used in this study were *International Journal of Police Science and Management, The Official Journal of the Society for Police Criminal Psychology, Police Practice and Research, Policing and Society, and Police Quarterly.* [See Appendix B for a description of each journal.] This descriptive study will provide practitioners, academicians, and other invested entities with data in formulating decisions related to future research needs in the field of law enforcement.

Research Questions

1. What research method is used in selected law enforcement refereed journal research articles over a five-year period?
2. What are the differences, if any, in research methods used in selected law enforcement refereed journal research articles over a five-year period based on selected attribute variable (author's/authors' sex)?

3. What are the differences, if any, in research methods used in selected law enforcement refereed journal research articles over a five-year period based on selected attribute variable author's/authors' role/function?
4. What five-year trends, if any, are identifiable from the analysis of selected law enforcement refereed journal research articles based on the journal, author's/authors' sex or author's/authors' role/function?

Operational Definitions

The following operational definitions will be used to analyze the questions for this study:

Acceptance rate: The acceptance rate is the percentage of submitted manuscripts that are accepted for publication by the journal's editorial board. The lower the acceptance, the more prestigious the journal (Saint Johns University, 2018).

Impact factor: The number of times a journal is cited in other professional publications (The University of Illinois at Chicago, 2016).

Mixed-Method: Utilization of both qualitative and quantitative research methods (Mertler, 2016).

Peer-Reviewed/ refereed: The verification of an author's scholarly work as determined by peers, upon being subjected to multiple critiques by scholars in that field (California Polytechnic State Univerity, 2018).

Qualitative: A method of understanding behavior based on collecting and analyzing non-numerical data (Mertler, 2016).

Quantitative: The analysis of problems using numerical data to describe, explain, predict, or control variables and phenomena of interest (Mertler, 2016).

Role/function: Author's/authors' professional affiliation and title.

Sex: Author's/authors' identity based on biological sex.

Methods

This study involved a descriptive analysis of the research methods utilized by the authors in the articles and the authors' characteristics (rank, sex, place of employment) for each article published in the previously described journals for a five-year period encompassing 2010-2014. The researcher analyzed a random sample of 187 articles published over the five-year period and analyzed the data based on descriptive statistics. An analysis of the research method utilized in each article was conducted using descriptive, non-experimental, quantitative, and chi-square statistics. The study included complete articles and excluded book reviews, essays, and similar publications. The study focused on the variables of academic rank of the lead author and co-authors, sex of the lead author, and method of research utilized for each research article (qualitative, quantitative, or mixed methods).

Limitations

The journals selected for this study were from five scholarly publications related to law enforcement over a five-year period. Other journals and timeframes may produce different results and conclusions. This study analyzed peer-reviewed journals from the field of law enforcement. The journals selected cover numerous aspects of law enforcement such as administration, community relations, investigation, psychological aspects of law enforcement, etc. Generalizations of the descriptive analysis of the data sets were not determined.

Summary

This study will be relevant to law enforcement professionals, academicians, and legislative policy makers who utilize peer-reviewed journals for current trends and best practices related to their profession. It will be useful to faculty, law-enforcement professionals and others who depend on publication acceptance in peer-reviewed publications for promotion, tenure, and position-related advancement. This study will assist prospective authors in targeting journals related to their type of research topics and maximize the chances of their research related projects being accepted for publication.

CHAPTER 2

REVIEW OF THE LITERATURE

This chapter reviews existing literature related to the primary research methods utilized in the field of law enforcement. The three research methods identified within this chapter are qualitative, quantitative and mixed methods. The focus is the evaluation of these methods and the integration of their findings within the field of law enforcement.

Qualitative Research Defined

Qualitative research focuses on lived experiences and human perceptions (Polit & Beck, 2012). Qualitative research is a method of natural inquiry that focuses on understanding social issues within their natural environments. Focusing on the why rather than what of social issues and their effects, qualitative researchers attempt to analyze these issues through systematic observation and questioning, rather than relying on statistical procedures and logic.

Denzin & Lincoln (2005) defined qualitative research as stated below:

"Qualitative research is a situate activity that locates the observer in the world. It consists of a set of interpretive, material practices that makes the world visible. These practices transform the world. They turn the world into series of representations, including field notes, interviews, conversations, photographs, recordings and memos to the self" (p. 3). Making sense or interpreting social events and experiences in terms of the perceptions of the individuals experiencing them is the strength of qualitative research. The emphasis of qualitative research is on a holistic description of the concepts being studied. According to Mertler (2016), qualitative researchers are more interested in the process of the study than the outcome of the study.

Bogdan and Biklen (2007) have identified five general constructs specific to all qualitative research; although these constructs may vary in the level applied, they do exist in all qualitative studies. These constructs are as follows:

- Qualitative research is naturalistic. Research observations occur in the natural setting or environment wherein the subject of the study is observed.
- Qualitative researchers present the analysis of data in the form of words or visual images rather than numerical values. The conclusions of qualitative research attempt to support the explanations of the gathered data.
- Qualitative researchers place an emphasis on the process of data collection as well as the outcomes of the data, commonly referred to as coding. Understanding the open-ended principles of how and why events occur is as important as the final findings of the study.
- The qualitative research process seeks to provide an unbiased description of the observed data. This construct focused on the importance of collecting all data in an unbiased or judgmental manner is highly important to qualitative researchers.
- Qualitative research observes how individuals perceive and make conclusions of events in their everyday lives, placing an emphasis on the individual's private logic and rationalizations relating to events and actions being studied (Bogdan & Biklen, 2007).

Current Applications of Qualitative Methods

Many fields such as business, medicine, education, and especially, law enforcement use qualitative research to garner a better understanding or exemplify the value of strategies or concepts. However, these fields are not the only ones that employ qualitative research. For

example, in the field of business and industry, researchers have employed qualitative methods to test the integrated framework of supplier development and buyer/supplier relationship development, resulting in empirical evidence (Shahzad, Sillanpaa, Sillanpaa & Imeris, 2016).

Within the field of medicine, the study of moral distress and coping strategies in oncology practice of both nurses and physicians employed qualitative research methodology; the results disclosed that doctors reported a mainly rational coping style, whereas nurses tended to focus on feelings and experiences (Lievrouw, et al., 2016). In all levels of education, published in prominent journals in the field of international and comparative education, a meta-analysis was conducted in order to determine whether qualitative research has remained true to the basic constructs underpinning accurate studies (da Costa, Hall, & Spear, 2016).

In the fields of criminology and criminal justice, researchers have utilized qualitative methods extensively to explore issues of a comparative and/or historical nature. The typical impression is the best research (and the majority of research) in law enforcement and other fields of science is quantitative research related to numerically-expressed social phenomena cannot be empirically supported (Deflem, 2015). As an example, researchers within the field of law enforcement have recognized the benefits of qualitative research when studying issues related to the job satisfaction of officers (Eliason, 2014).

Strengths and Limitations of Qualitative Research

Anderson (2010) presented in the *American Journal of Pharmaceutical Education* an article titled, “Presenting and Evaluating Qualitative Research.” Within this article, the author enumerated common strengths and weaknesses relating to the use of qualitative research methods. The strengths are as follows:

- Issues can be examined in detail and in depth.
- Interviews are not restricted to specific questions and can be guided/ redirected by the researcher in real time.
- The research framework and direction can be quickly revised as new information emerges.
- The data based on human experience that is obtained is powerful and sometimes more compelling than quantitative data.
- Subtleties and complexities about the research subjects and/or topic are discovered that are often missed by more positivistic enquiries.
- Data usually are collected from a few cases or individuals so findings cannot be generalized to a larger population. Findings can, however, be transferable to another setting (Anderson, 2010).

Anderson (2010) also listed the limitations of qualitative research:

- Research quality is heavily dependent on the individual skills of the researcher and more easily influenced by the researcher's personal biases and idiosyncrasies.
- Rigor is more difficult to maintain, assess, and demonstrate.
- The volume of data makes analysis and interpretation time consuming.
- Qualitative research methodology is sometimes not as well understood and accepted as quantitative research within the scientific community
- The researcher's presence during data gathering, which is often unavoidable in qualitative research, can affect the subjects' responses.
- Issues of anonymity and confidentiality can present problems when presenting findings

- Findings can be more difficult and time consuming to characterize in a visual way (Anderson, 2010).

Quantitative Research Defined

Unlike the major goal of qualitative research, which is to become thoroughly involved in the setting and study of participants, the major goal of quantitative research is for the researcher to remain as objective as possible. Creswell (2014) has identified five general constructs of quantitative research.

- The first construct of quantitative research is the development, by the researcher(s) of a theory, specific hypothesis or problem statement.
- The second construct is conducting a comprehensive literature review concerning previous studies or literature related to the topic of the study.
- The third construct is the collection of data.
- The fourth construct is the application of an experimental design applied and/or mathematical formulas to analyze the data as to proving or disproving the theory, hypothesis or problem statement.
- The fifth construct is to write a final report (Creswell, 2014).

Current Applications of Quantitative Methods

Historically and universally, quantitative research methodology has been the most utilized method of research. Evolving from early applications in the fields of science and medicine, quantitative-based research methods have spread to all aspects of our society. For example, with advancements in mass media and technology, quantitative research methods have been used in business and industry in the development of marketing strategies. Quantitative research within marketing has provided market knowledge from the perspective of the

consumers and a competitive environment, providing vital information concerning both the design and implementation of marketing strategies and suggesting how to present the superiority of products to perspective consumers (Farcas, 2017). Health professionals have also benefited from studies utilizing quantitative methods. For example, a recent study identified the need for health care providers to adapt strategies and demonstrate characteristics creating settings that are more supportive of sexuality when treating older adults (Bauer, Haesler, & Fetherstonhaugh, 2016).

Political campaigns often rely upon data collected from quantitative research as well. A recent study from *Public Opinion Quarterly* revealed overlooking quantitatively-produced data related to political issues and views can mask significant persuasion effects. One significant effect is that individuals who have low receptivity to factual information will not be influenced by data-driven information, while those who have high receptivity to data-driven information are more likely to be persuaded by such (Merola and Hitt, 2016). In the field of education, more specifically the field of adult education, Boeren (2018) analyzed the use of quantitative research methods relating to adult education. The author found qualitative methods were more widely used than quantitative methods. In addition, as a quantitative researcher, the author presented strategies for increasing the use of quantitative methods when studying issues relating to adult education (Boeren, 2018).

Law enforcement found value utilizing quantitative research methods concerning crime analysis and officer safety. Related to these variables, two recent studies were published in *Policing: An International Journal*. The first study suggested crime analysis is used by higher-ranking personnel in the patrol division and discussed the types of strategies implemented using crime analyses. The findings show the routine use of crime analysis is not well integrated (Santos

& Taylor, 2014). The second study investigated the risk factors for injury to police officers in vehicle crashes. Findings represented seat belt use remains critical for safety; other areas illuminated for concern were driving under emergency conditions and improved protocols to protect officers in stationary vehicles (LaTourrette, 2015).

Strengths and Limitations of Quantitative Research

As quantitative research methods continue to be used in scholarly studies, several entities have published insights on the pros and cons related to the application of quantitative designs. The University of Southern California (USC Libraries) (2018) research guide titled "Organizing Your Social Science Research Paper: Quantitative Methods" synthesized the work of several authors in outlining the strengths and limitations of quantitative research methods. The guide outlined the strengths as follows. Quantitative research

- Allows for a broader study, involving a greater number of subjects, and enhancing the generalization of the results;
- Allows for greater objectivity and accuracy of results. Generally, quantitative methods are designed to provide summaries of data that support generalizations about the phenomenon under study. In order to accomplish this, quantitative research usually involves few variables and many cases, and employs prescribed procedures to ensure validity and reliability;
- Applying well established standards means that the research can be replicated and then analyzed and compared with similar studies;
- You can summarize vast sources of information and make comparisons across categories and over time;

- Personal bias can be avoided by keeping a ‘distance’ from participating subjects and using accepted computational techniques (University of Southern California, 2018).

However, the University of Southern California (2018) research guide also explained the limitations of quantitative research:

- Quantitative data is more efficient and able to test hypotheses, but may miss contextual detail;
- Quantitative research uses a static and rigid approach and so employs an inflexible process of discovery;
- The development of standard questions by researchers can lead to ‘structural bias’ and false representation, where the data actually reflects the view of the researcher instead of the participating subject;
- Results provide less detail on behavior, attitudes, and motivation;
- Researcher may collect a much narrower and sometimes superficial dataset;
- Results are limited as they provide numerical descriptions rather than detailed narrative and generally provide less elaborate accounts of human perception;
- The research is often carried out in an unnatural, artificial environment so that a level of control can be applied to the exercise. This level of control might not normally be in place in the real world thus yielding “laboratory results” as opposed to “real world results”; and
- Preset answers will not necessarily reflect how people really feel about a subject and, in some cases, might just be the closest match to the preconceived hypothesis (University of Southern California, 2018).

Mixed Methods Research Defined

The use of mixed method research methodology dates back to the mid-1980s. Until that time, most quantitative and qualitative researchers did not agree on the scholarly level of the other approach in doing research. Two of the most recognized authors in defining mixed method research are John Creswell (2014) and Plano Clark. According to Creswell (2014), their definition of mixed methods is the incorporation of one qualitative set of data and one quantitative set of data. Various designs for analyzing the data can be incorporated at the researcher's discretion.

Mertler (2016) presented six characteristics of mixed methods research.

- Collection and treatment of both qualitative and quantitative data related to the studies hypothesis or research question;
- Combination of and relation of (mixing) both forms of data in a sequential fashion to strengthen or explain the data sets;
- Treatment and analysis of the data sets;
- Determination of the appropriate research design;
- Application of universally-accepted worldviews and theoretical perspectives;
- Utilization of a specific plan based upon the research design to conduct the study (Mertler, 2016).

Mixed methods research appears to have grown in popularity among researchers over the past 15 years, and the combination of quantitative and qualitative research methods is now being employed in varying aspects of professions. The following studies are examples from various fields and professions.

In a recent study in higher education, researchers used a mixed method design to study prerequisite curriculum requirements and the impact on student performance in higher level courses (Wisneski, Ozogul & Bichelmeyer, 2017). Of interest to both medical and mental health providers, a mixed method research study examined medical students' beliefs and attitudes towards the use of psychotherapy. The findings of the research suggested that attitudes towards psychotherapy predict willingness to seek therapy (Constantinou, Georgiou, & Perdikogianni, 2017).

Social science researchers utilized mixed methods research and global event data to determine when women were more likely to protest. The results of the study indicated women were more likely to protest when high levels of gendered economic and political discrimination were present (Murdie & Peksen, 2015). Related to the area of business, researchers conducted a mixed methods study on cognitively mature young adults in relationship to different marketing strategies and their impact on participants' attitudes in purchasing decisions (Buchanan, Kelly, & Yeatman, 2017). In the fields of criminal justice and criminology, a recent mixed method study emphasized factors and circumstances that contribute to deadly outcomes for police officers, thereby increasing awareness for police officers' safety and future training (Gruenewald, Dooley, Suttmoeller, Chermak, & Freilich, 2016).

A Comparative View of Qualitative, Quantitative, and Mixed Methods Research

Table 1, below (Creswell, 2014) illustrates the variances of how the previously presented basic constructs are utilized in their specific methods of research.

Table 1. Quantitative, Mixed, and Qualitative Methods

Quantitative Methods	Qualitative Methods	Mixed Methods
Pre-determined	Both pre-determined and emerging methods	Emerging methods
Instrument-based questions	Both open- and closed-ended questions	Open-ended questions
Performance data, attitude data, observational data, and census data	Multiple forms of data drawing on all possibilities	Interview data, observation data, document data, and audiovisual data
Statistical analysis	Statistical and text analysis	Text and image analysis
Statistical interpretation	Across databases interpretation	Themes, patterns interpretation

Note: Adapted from *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 4th ed., by J. Creswell, 2014, p. 17. Copyright © 2014 by SAGE Publications, Inc. Reprinted by permission of SAGE Publications, Inc.

Synopsis of Review

Most of the studies published in professional journals are specific to an issue, concept, or problem germane to that discipline. A few studies focused on the percentage of a specific type of research method (quantitative, qualitative, or mixed methods) published in professional journals related to particular professions or areas. This information is useful to prospective researchers and authors in formulating future strategies to address historically-based and/or more contemporary issues, problems, or challenges related to their professional area.

Unlike the majority of professions documented above, the area of law enforcement has a more limited historical evolution in regards to the formation of professional associations which publish refereed journals. Most of the growth of associations related to the profession of law enforcement has taken place over the past 20 to 30 years (Police Foundation, 2016).

Although the journals produced by these associations have published articles based on varying research methodologies, this study will add to the research literature a descriptive analysis of not only the type of methodology used, but the author's profile (academic rank/role, professional affiliation, and sex), a type of analysis that has not been attempted previously. These data can provide future researchers with valuable insights on formulating strategies for future studies related to the evolving challenges in the field of law enforcement.

CHAPTER 3

RESEARCH METHODS AND DESIGN

This chapter outlines the study's framework of description of research methodologies used by authors in peer-reviewed law enforcement journals. The variables that were examined included the sex of authors, academic rank /title, and the primary methodology applied in the research articles (qualitative, quantitative, and mixed methods).

Research Questions Restated

1. What research method is used in selected law enforcement refereed journal research articles over a five-year period?
2. What are the differences, if any, in research methods used in selected law enforcement refereed journal research articles over a five-year period based on selected attribute variable author's/authors' sex?
3. What are the differences, if any, in research methods used in selected law enforcement refereed journal research articles over a five-year period based on selected attribute variable author's/authors' role/function?
4. What five-year trends, if any, are identifiable from the analysis of selected law enforcement refereed journal research articles based on the journal, author's/authors' sex or author's/authors' role/function?

Study Design and Journal Description

This study used a descriptive, quantitative, non-experimental research design. This design relied on data collected from five peer-reviewed scholarly law enforcement journals published from January, 2010, through December, 2014. The criteria for the selection of the specific journals used in this study were based upon the relevance to law enforcement, the journal's use

of scholarly research and peer-reviewed articles, the provision of sufficient data for review, and the journal's availability in database subscriptions of Marshall University Libraries. The selected journals are recognized by leading law enforcement organizations and associations worldwide.

Police Practice and Research: An International Journal

Police Practice and Research publishes articles and reports from practitioners, researchers, and others interested in developments in policing and in analysis of both public order and safety as it affects the quality of life. The journal presents current practices in innovative police research, in addition to operational and administrative practices from around the world. The journal is peer-reviewed and published bimonthly, both online and in print. The publisher of the journal is Taylor and Francis of London, UK. The journal impact according to ResearchGate (2018a) is 0.37.

International Journal of Police Science & Management

International Journal of Police Science & Management is peer-reviewed through a rigorous double-blind reviewing policy. This journal is published with the goal of facilitating the exchange between academic research and criminal justice organizations regarding good practice and practice evaluation. The journal is published by Sage, an international publishing company. The journal is published quarterly, both in print and online; the journal impact according to ResearchGate (2018b) is 0.50.

The Official Journal of the Society for Police and Criminal Psychology

The Official Journal of the Society for Police and Criminal Psychology consists of peer-reviewed reports and researched findings regarding criminal behavior, psychological principles pertaining to criminal justice, and especially, law enforcement. The journal is published quarterly

both online and in print by Springer International Publishing. The journal impact according to Springer Link (2018) is 0.59.

Police Quarterly

Police Quarterly publishes both qualitative and quantitative studies concerning police-oriented research for audiences such as practitioners and academics. The journal is published quarterly both in print and online by Sage Periodicals of Thousand Oaks, California. The journal's impact factor according to its publisher's report is 1.457 (Sage Journals, 2018).

Policing and Society

Policing and Society articles are peer-reviewed by editorial screening and an anonymous peer-review process. The journal is widely known as the leading academic journal specializing in the study of policing institutions and their practices. Published eight times annually by International Publishers Taylor and Francis, the journal's impact factor is 1.61 (Taylor & Francis Online, 2018).

Data Collection and Analysis

This study analyzed 185 articles published in five law enforcement journals for a 5-year period beginning with 2010 through 2014, relating to the research method of the article and the selected author characteristics. The data analysis employed chi-square and descriptive statistics. The researcher collected, coded article data and used the current version of the statistical package for the social sciences (SPSS) to calculate statistics for each research question (RQ) by application of the chi-square test, using the $p < .05$ level of significance for each test. This study used descriptive statistics in reviewing and analyzing basic characteristics of the articles and authors. These descriptive statistics summarized various data sets and provided information

related to the article publication year, sample size and the author characteristics such as rank, number of authors, and sex.

RQ 1: What research method is used in selected law enforcement refereed journal research articles over a five-year period? The researcher identified the primary research method for each article. Both chi-square and descriptive statistics were applied. The chi-square test identified possible significant differences of the articles' research methods, and descriptive statistics calculated the percentage of use for the research methods across all articles reviewed.

RQ 2: What are the differences, if any, in research methods used in selected law enforcement refereed journal research articles over a five-year period based on selected attribute variable author's/authors' sex? Descriptive statistics were applied to determine the percentage each research method was used according to authors' sex. A chi-square cross tabulation analyzed these data further.

RQ 3: What are the differences, if any, in research methods used in selected law enforcement refereed journal research articles over a five-year period based on selected attribute variable author's/authors' role/function? A cross tabulation chi-square was applied to determine the relationship of academic rank to the method of research selected for each article reviewed. Descriptive statistics calculated the percentage of each academic rank to the use of each research method.

RQ 4: What five-year trends, if any, are identifiable from the analysis of selected law enforcement refereed journal research articles based on the journal, author's/authors' sex or author's/authors' role/function? Both chi-square and descriptive statistics were applied. The chi-square test identified possible significant five-year trends of the research variables (method,

author's/authors' sex and author's/authors' role/function, and descriptive statistics calculated the percentage of use for these same variables.

Method of Data Collection

The researcher developed a database to collect and organize primary journal information. This information included journal title, issues published per year, and the number of articles per issue identified as using the three research methods being studied. The author also developed a coding system for the journals to assist in reducing the chance of recording errors and the amount of data entered into the data base. The article data base included the following identifying variables: journal code, volume, issue, month of publication, year of publication, title of article, name of lead author, sex of lead author, academic rank or other professional title of lead author, name of secondary author(s), sex of secondary author(s), rank or other title of secondary author(s), and primary methodology.

CHAPTER 4

FINDINGS BASED ON THE ANALYSIS OF THE DATA

The data analyzed in this study consisted of five law enforcement-related scholarly peer-reviewed journals. The dates of the articles and journals examined began with year 2010 and concluded with the year 2014. The journals reviewed within this study included *Police Quarterly (1), Policing and Society (2), International Journal of Police Science and Management (3), Police Practice and Research (4), and The Official Journal of the Society for Police Criminal Psychology (5).* [See Appendix B for a description of each journal.]

The reviewed journals related to this study were retrieved from Marshall University's digital library based upon the following criteria established by the researcher: the articles within the scholarly journal must be peer-reviewed, accessible to the researcher, focused on law enforcement- specific research topics, comprised of a sufficient number of articles for analysis, and produced within the specified years of 2010 and 2014. Upon identifying and acquiring sufficient and relevant articles for this study, the researcher analyzed the following variables: journal title, year, number of authors, and co-authors, author's/authors' sex, and author's/authors' role /function. The variables analyzed with comparative statistics included sex of the lead author and coauthors, role/function of the lead author and coauthors, the predominate method of research used in the research articles (quantitative, qualitative, and mixed methods) and observable five year trends related to these variables.

A Code Book [see Appendix C] and a corresponding spreadsheet were developed by the author because an instrument that included all of the selected components of information needed for this study could not be found. The code book and form included the following information:

name of the journal, number of times per year the journal was published, year the journal was published, research design, sex of the authors, and role/function of the authors.

Variables Information

A total of 185 research articles and 427 authors were included in the study. Each article ranged from one to six authors, with an average of two authors per article. For the 185 articles, there were 185 first authors, 133 second authors, 66 third authors, 27 fourth authors, 11 fifth authors, and 5 sixth authors.

Table 2 indicates the frequency distribution of valid articles per journal. A total of 40 articles were selected from journals 1, 2, and 3 (21.6% per journal). Journal 4 had 37 selected articles (20.0%) and journal 5 yielded 28 articles (15.1%).

Table 2. Distribution of Articles per Journal

Journal	Frequency	Percent	Valid Percent	Cumulative Percent
1	40	21.6	21.6	21.6
2	40	21.6	21.6	43.2
3	40	21.6	21.6	64.9
4	37	20.0	20.0	84.9
5	28	15.1	15.1	100.0
Total	185	100.0	100.0	100.0

Figure 1 offers a visual comparison of these percentages.

Figure 1. Number of Articles per Journal

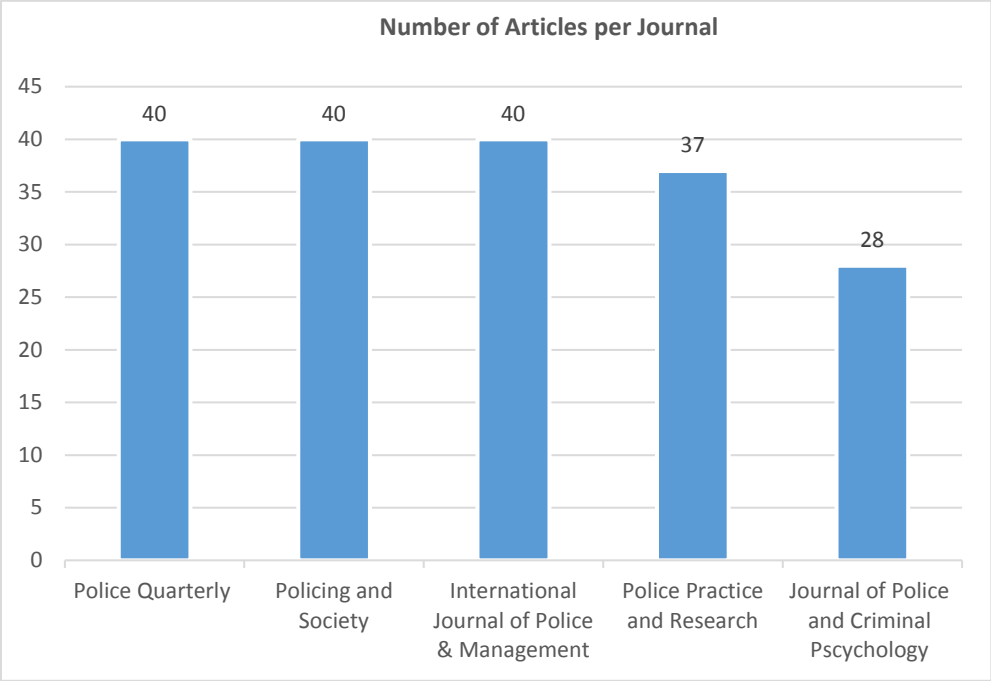


Table 3 indicates the frequency distribution of articles per journal. From the five journals in the year 2010, 31 (16.8%) articles were reviewed. For the year 2011, from the same five journals, 41 (22.2%) articles were reviewed. For the years 2012 and 2013, 39 (21% per each year) articles were reviewed for each year. For 2014, 35 (18.9%) articles were reviewed.

Table 3. Article Distribution per Year

Journal	Frequency	Percent	Valid Percent	Cumulative Percent
1	31	16.8	16.8	16.8
2	41	22.2	22.2	38.9
3	39	21.1	21.1	60.0
4	39	21.1	21.1	81.1
5	35	18.9	18.9	100.0
Total	185	100.0	100.0	100.0

Figure 2 contains a visual representation of the same information.

Figure 2. Article Distribution per Year

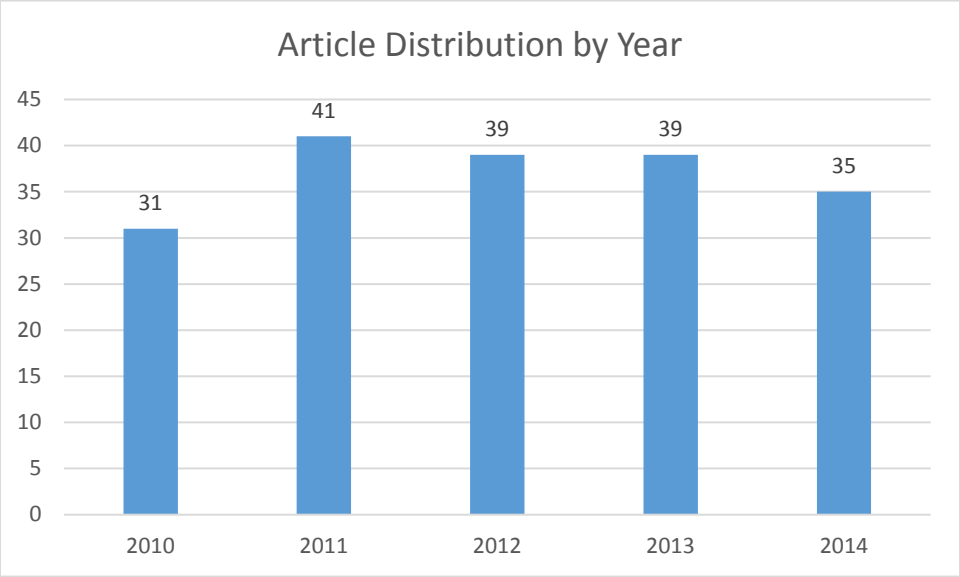


Table 4 indicates the frequency distribution of the research method per article, 2010-2014. From the five journals analyzed, 42 (22.7%) articles utilized quantitative methods. Qualitative methods were used in 62 articles (33.5%). Mixed Methods research was used in 81 articles (43.8%).

Table 4. Research Method Distribution

Journal	Frequency	Percent	Valid Percent	Cumulative Percent
1	42	22.7	22.7	22.7
2	62	33.5	33.5	56.2
3	81	43.8	43.8	100.0
Total	185	100.0	100.0	100.0

Figure 3 contains a visual representation of the same information.

Figure 3. Research Method Distribution

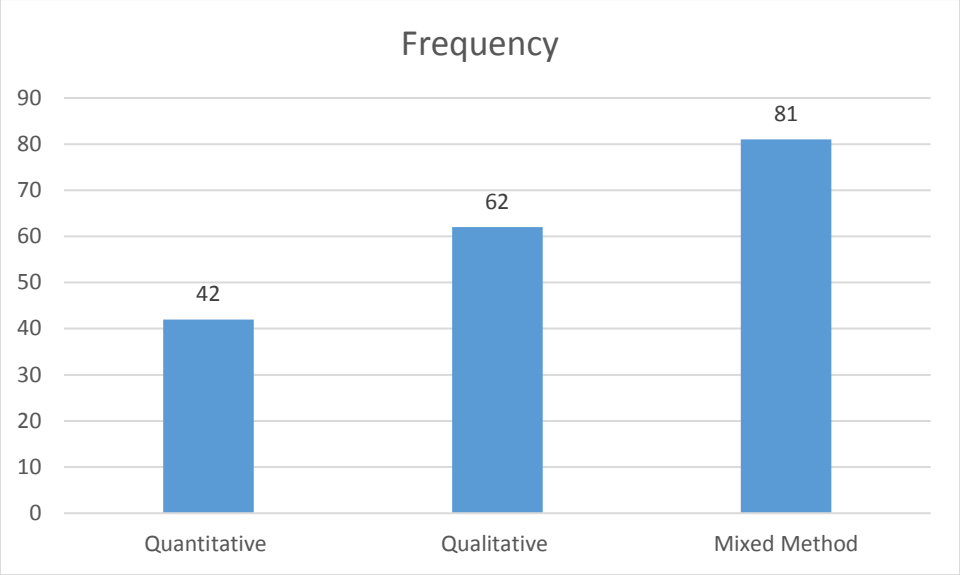


Table 5 indicates the frequency distribution of First Author's Sex per article. Of the total articles, 123 first authors were male (66.5%), and 62 were female (33.5%).

Table 5. Distribution of First Authors per Article by Sex

Journal	Frequency	Percent	Valid Percent	Cumulative Percent
1	123	66.5	66.5	66.5
2	62	33.5	33.5	100.0
Total	185	100.0	100.0	100.0

Figure 4 offers a visual representation of the same information.

Figure 4. Distribution of First Authors per Article by Sex

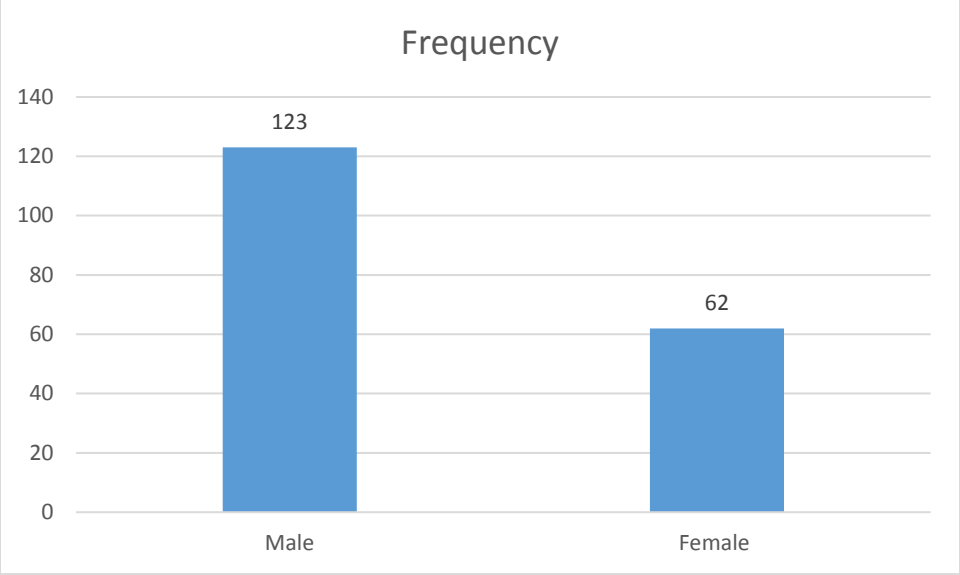


Table 6 indicates the frequency distribution of first author's role/function per article. Of the total, 127 first authors had academic role/functions (68.6%), and 56 had non-academic roles/functions (30.3%). Two (1.1%) first authors' roles/functions could not be determined.

Table 6. Distribution of First Authors by Role/Function

Journal	Frequency	Percent	Valid Percent	Cumulative Percent
1	127	68.6	69.4	69.4
2	56	30.3	30.6	100.0
Sub-Total	183	98.9	100.0	100.0
Missing	2	1.1	0	
Total	185	100.0	100.0	100.0

Figure 5 provides a visual summary of the same information.

Figure 5. Distribution of First Authors by Role/Function

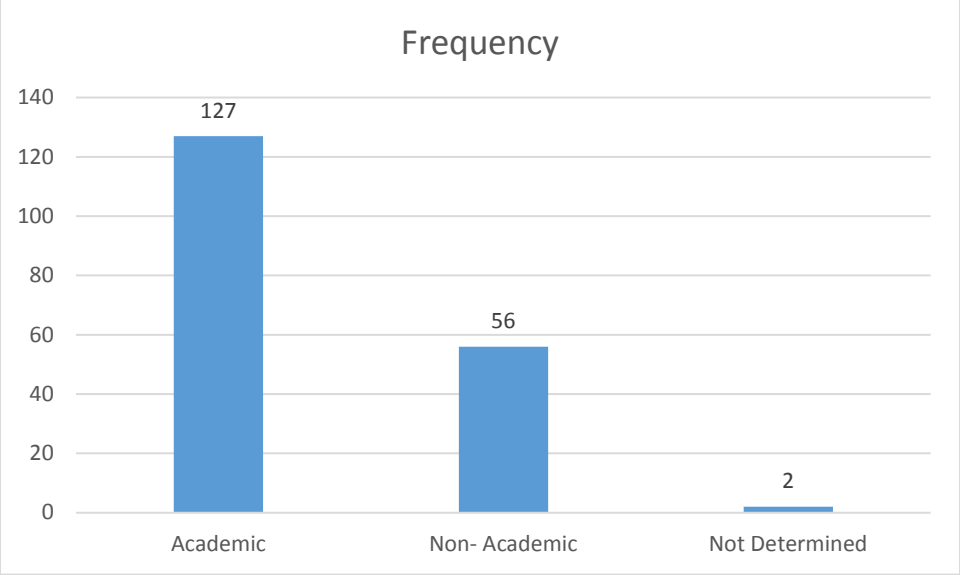


Table 7 indicates the frequency distribution of second authors by sex per article. Of the total articles, 84 second authors were male (63.2%), and 49 were female (36.8%).

Table 7. Distribution of Second Authors per Article by Sex

Journal	Frequency	Percent	Valid Percent	Cumulative Percent
1	84	45.4	63.2	63.2
2	49	26.5	36.8	100.0
Sub-Total	133	71.9	100.0	100.0
Missing	52	28.1	0	
Total	185	100.0	100.0	100.0

Figure 6 provides a visual information of the same information.

Figure 6. Distribution of Second Authors per Article by Sex

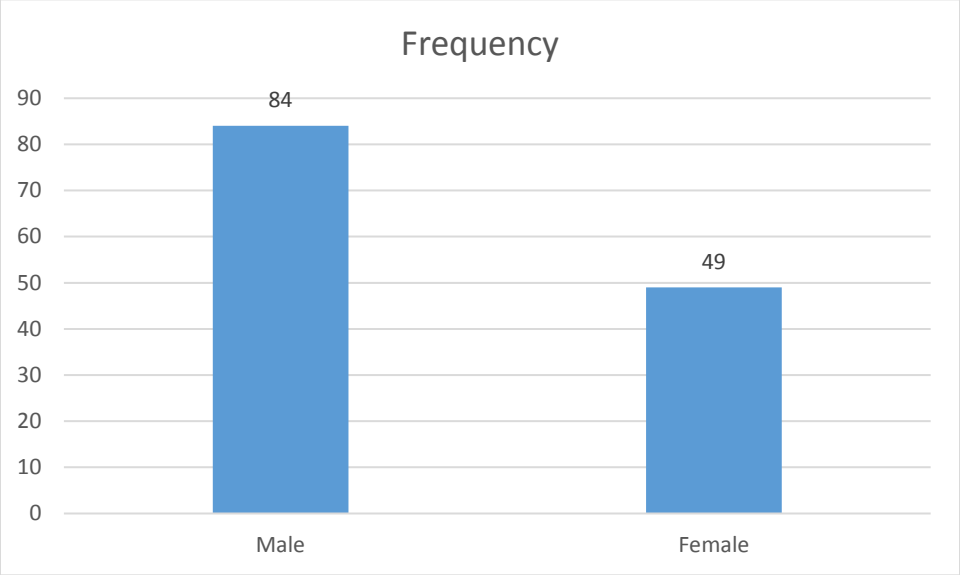


Table 8 indicates the frequency distribution of second authors by role/function per article. Of the total articles, 98 second authors had academic role/functions (74.2%), and 34 had non-academic roles/functions (25.8%).

Table 8. Distribution of Second Authors per Article by Role/Function

Journal	Frequency	Percent	Valid Percent	Cumulative Percent
1	98	53.0	74.2	74.2
2	34	18.4	25.8	100.0
Sub-Total	132	71.4	100.0	100.0
Missing	53	28.6	0	
Total	185	100.0	100.0	100.0

Figure 7 provides a visual representation of the same information.

Figure 7. Distribution of Second Authors per Article by Role/Function

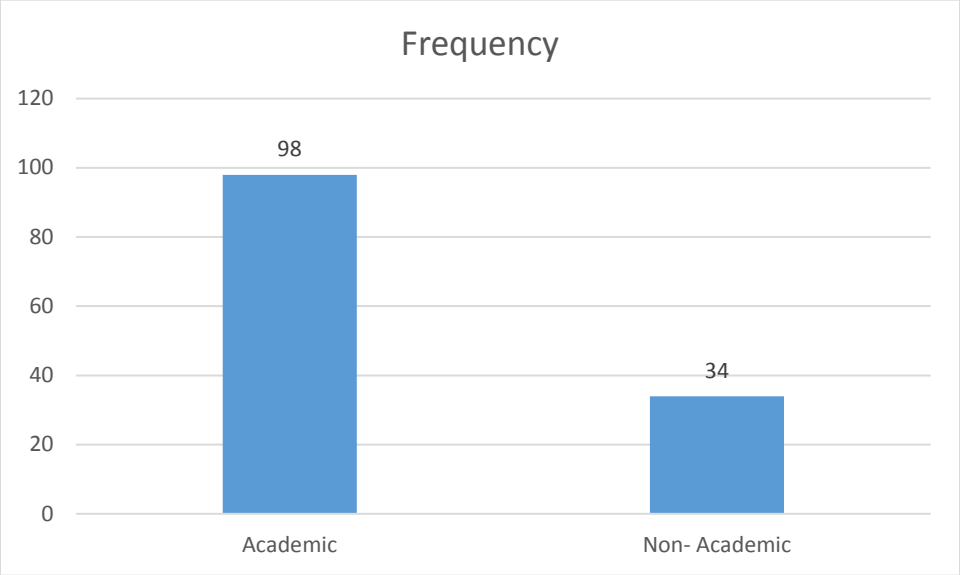


Table 9 indicates the frequency distribution of third authors by sex per article. Of the total articles, 44 third authors were male (66.7%), and 22 were female (33.3%).

Table 9. Distribution of Third Authors per Article by Sex

Journal	Frequency	Percent	Valid Percent	Cumulative Percent
1	44	23.8	66.7	66.7
2	22	11.9	33.3	100.0
Sub-Total	66	35.7	100.0	100.0
Missing	119	64.3	0	
Total	185	100.0	100.0	100.0

Figure 8 provides a visual representation of the same information.

Figure 8. Distribution of Third Authors per Article by Sex

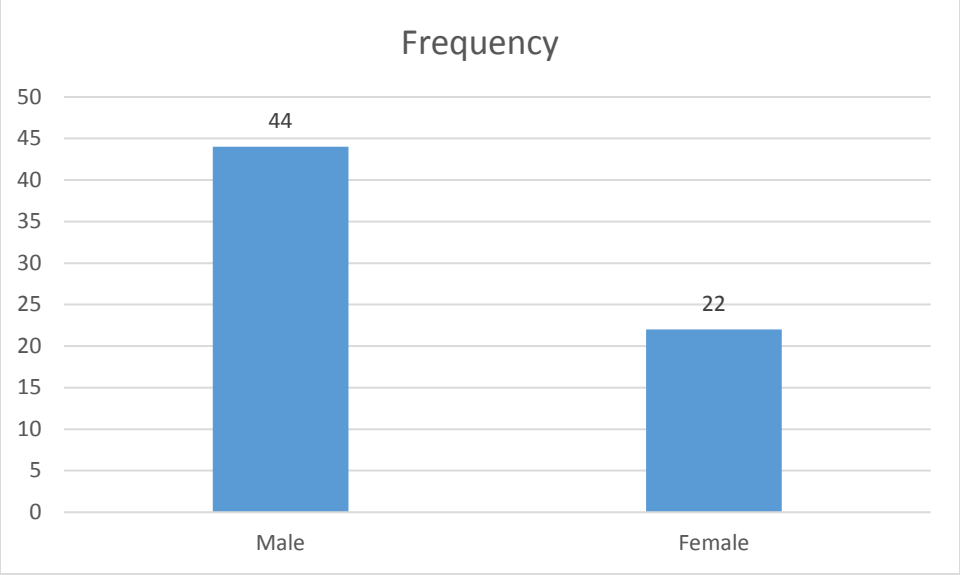


Table 10 indicates the frequency distribution of third authors' roles/functions per article. Of the total articles, 43 third authors had academic roles/functions (65.2%), and 23 had non-academic roles/functions (34.8%).

Table 10. Distribution of Third Authors per Article by Role/Function

Journal	Frequency	Percent	Valid Percent	Cumulative Percent
1	43	23.2	65.2	65.2
2	23	12.4	34.8	100.0
Sub-Total	66	35.7	100.0	100.0
Missing	119	64.3	0	
Total	185	100.0	100.0	100.0

Figure 9 provides a visual representation of this information.

Figure 9. Distribution of Third Authors per Article by Role/Function

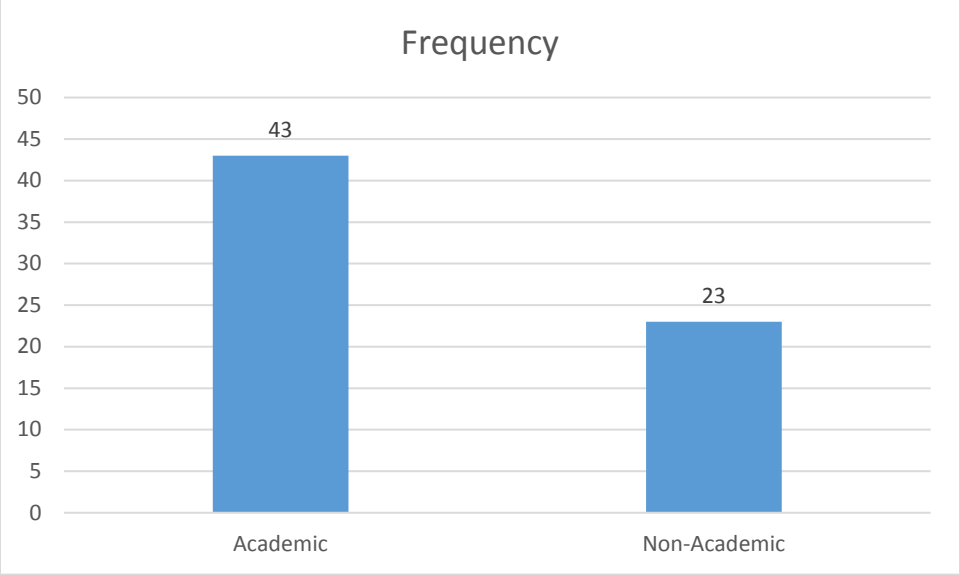


Table 11 indicates the frequency distribution of fourth authors by sex per article. Of the total articles, 20 fourth authors were male (74.1%), and 7 were female (25.9%).

Table 11. Distribution of Fourth Authors per Article by Sex

Journal	Frequency	Percent	Valid Percent	Cumulative Percent
1	20	10.8	74.1	74.1
2	7	3.8	25.9	100.0
Sub-Total	27	14.6	100.0	100.0
Missing	158	85.4	0	
Total	185	100.0	100.0	100.0

Figure 10 provides a visual representation of the same information.

Figure 10. Distribution of Fourth Authors per Article by Sex

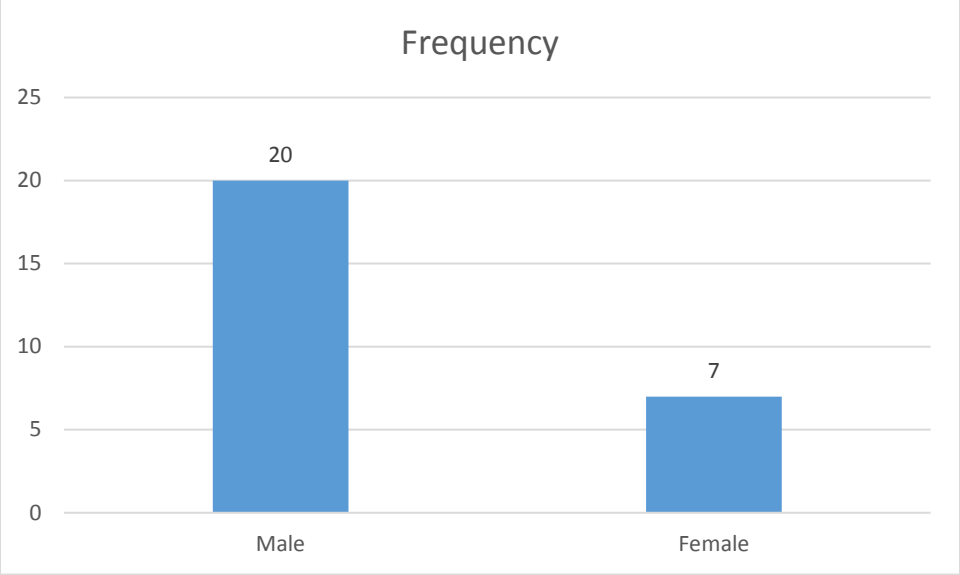


Table 12 indicates the frequency distribution of fourth authors' roles/functions per article. Of the total articles, 18 fourth authors had academic roles/functions (66.7%), and 9 had non-academic roles/functions (33.3%).

Table 12. Distribution of Fourth Authors per Article by Role/Function

Journal	Frequency	Percent	Valid Percent	Cumulative Percent
1	18	9.7	66.7	66.7
2	9	4.9	33.3	100.0
Sub-Total	27	14.6	100.0	100.0
Missing	158	85.4	0	
Total	185	100.0	100.0	100.0

Figure 11 provides a visual representation of the same information.

Figure 11. Distribution of Fourth Articles per Article by Role/Function

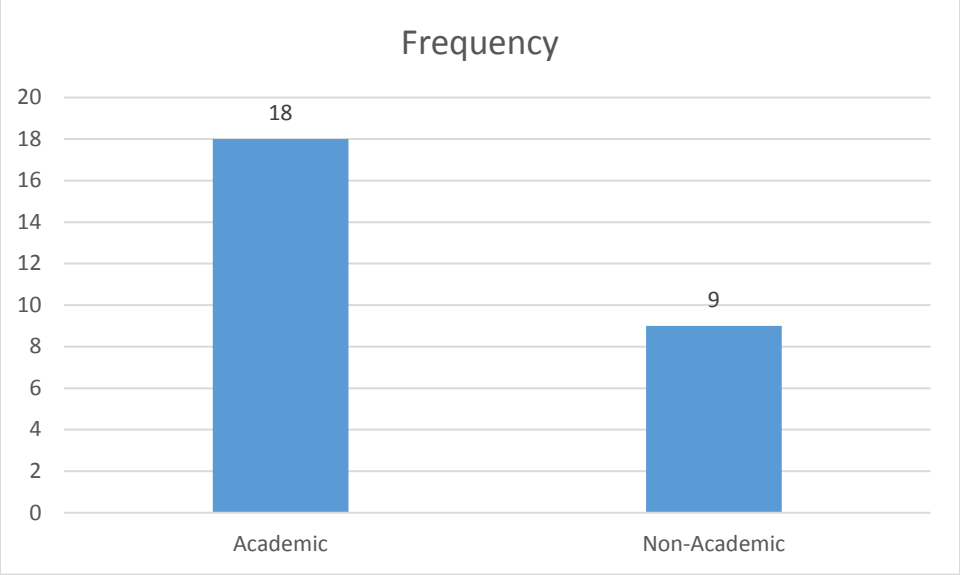


Table 13 indicates the frequency distribution of fifth authors by sex per article. Of the total articles, 5 Fifth Authors were male (45.5%), and 6 were female (54.5%).

Table 13. Distribution of Fifth Authors per Article by Sex

Journal	Frequency	Percent	Valid Percent	Cumulative Percent
1	5	2.7	45.5	45.5
2	6	3.2	54.5	100.0
Sub-Total	11	5.9	100.0	100.0
Missing	174	94.1	0	
Total	185	100.0	100.0	100.0

Figure 12 provides a visual representation of the same information.

Figure 12. Distribution of Fifth Authors per Article by Sex

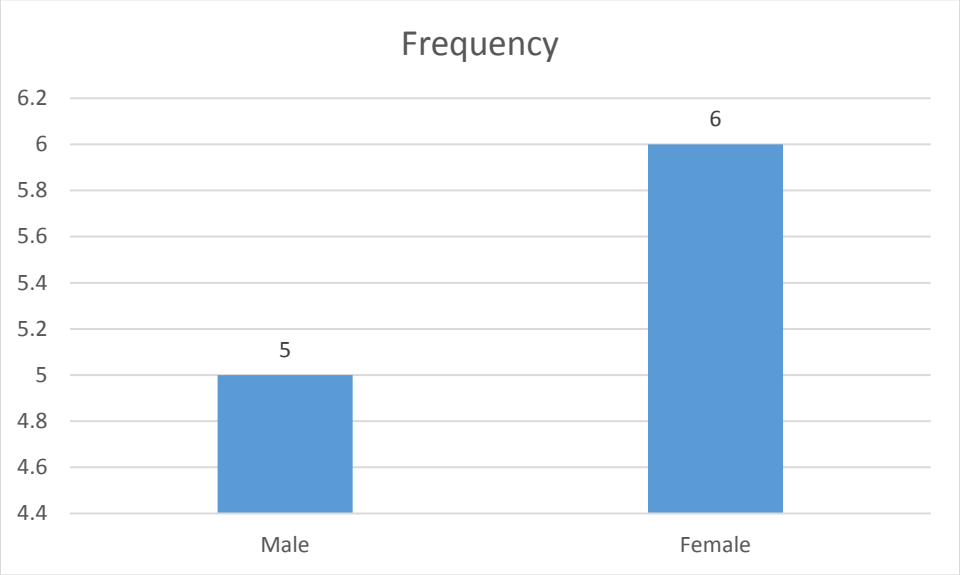


Table 14 indicates the frequency distribution of fifth author roles/functions per article. Of the total articles, 5 fifth authors had academic roles/functions (45.5%), and 6 had non-academic roles/functions (54.5%).

Table 14. Distribution of Fifth Authors per Article by Role/Function

Journal	Frequency	Percent	Valid Percent	Cumulative Percent
1	5	2.7	45.5	45.5
2	6	3.2	54.5	100.0
Sub-Total	11	5.9	100.0	100.0
Missing	174	94.1	0	
Total	185	100.0	100.0	100.0

Figure 13 provides a visual representation of the same information.

Figure 13. Distribution of Fifth Authors per Article by Role/Function

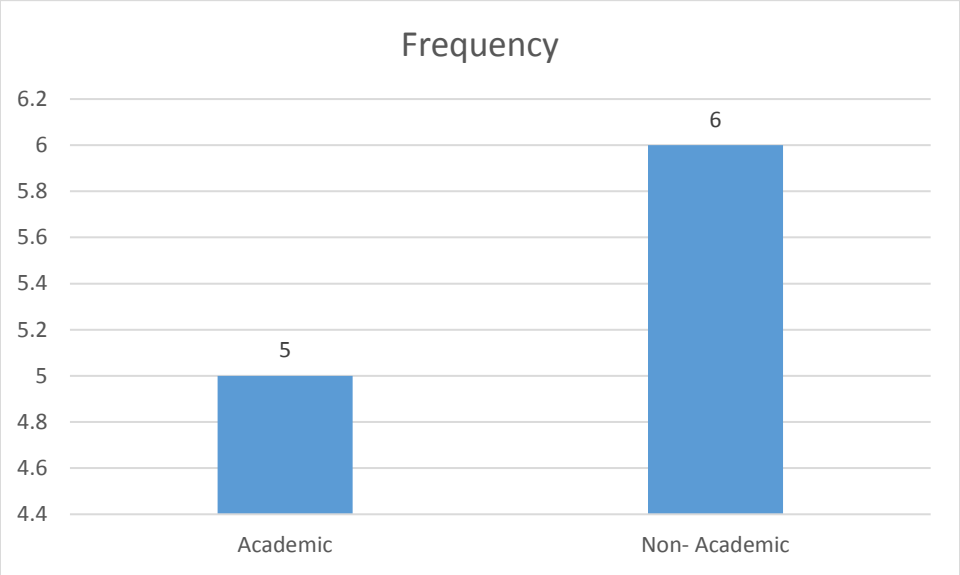


Table 15 indicates the frequency distribution of sixth authors by sex per article. Of the total articles, 1 Sixth Author was male (20%), and 4 were female (80%).

Table 15. Distribution of Sixth Authors per Article by Sex

Journal	Frequency	Percent	Valid Percent	Cumulative Percent
1	1	0.5	20.0	20.0
2	4	2.2	80.0	100.0
Sub-Total	5	2.7	100.0	100.0
Missing	180	97.3	0	
Total	185	100.0	100.0	100.0

Figure 14 provides a visual representation of the same information.

Figure 14. Distribution of Sixth Authors per Article by Sex

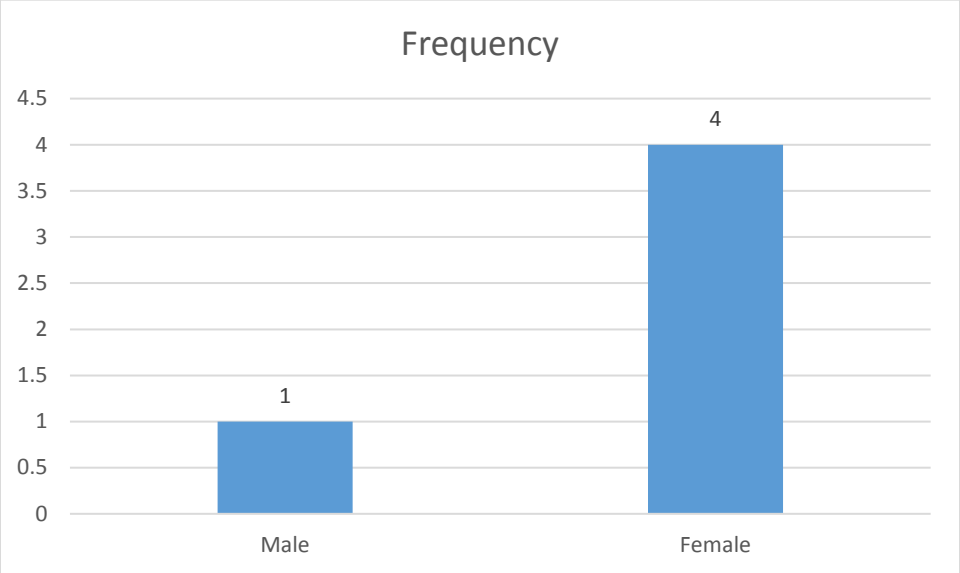


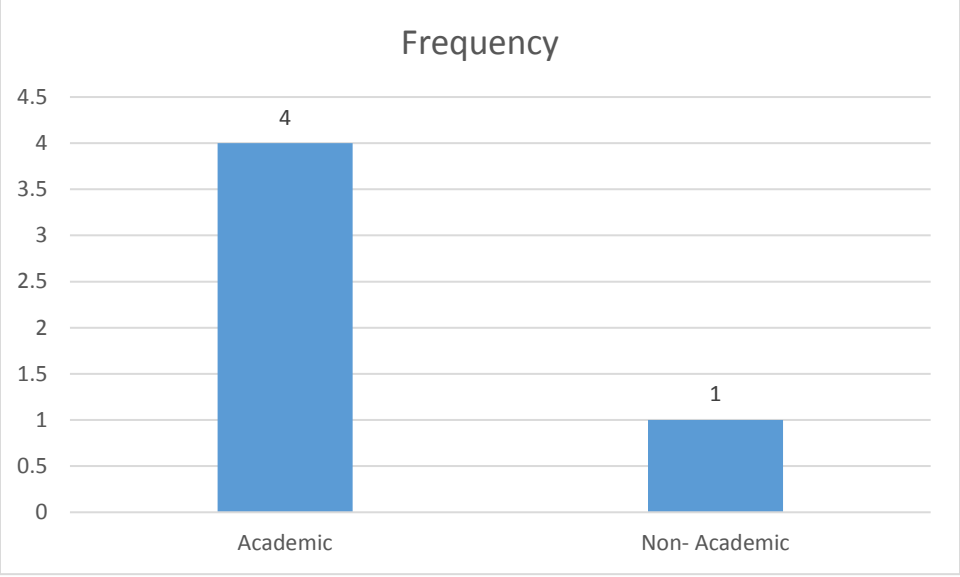
Table 16 indicates the frequency distribution of sixth authors' roles/functions per article. Of the total articles, 4 sixth authors had academic roles/functions (80%), and 1had non-academic roles/functions (20%).

Table 16. Distribution of Sixth Authors per Article by Role/Function

Journal	Frequency	Percent	Valid Percent	Cumulative Percent
1	4	2.2	80.0	80.0
2	1	.5	20.0	100.0
Sub-Total	5	2.7	100.0	100.0
Missing	180	97.3	0	
Total	185	100.0	100.0	100.0

Figure 15 provides a visual representation of the same information.

Figure 15. Distribution of Sixth Authors per Article by Role/Function



Data Analysis Related to Research Questions

After locating and collecting the reviewed articles, data were retrieved and coded, using SPSS 16.22. Data were analyzed for each research question (RQ) using the chi-square test. The question was tested at the $p < .05$ level of significance.

RQ1: What research method is used in selected law enforcement refereed journal research articles over a five-year period?

Research Question 1 examined the 185 articles selected for this study in terms of the research method used within the research article. The chi-square statistic was used to test for significant difference in the methodology used in the research article per journal. Table 17 lists the RQ1 frequency of research method per journal. This distribution for Journal One (*Police Quarterly*) was quantitative 16 (40.0%), qualitative 8 (20.0%) and mixed methods 16 (40.0%). For Journal Two (*Policing and Society*), it was quantitative 1 (2.5%), qualitative 15 (37.5%), and mixed methods 24 (60.0%). Journal Three (*International Journal of Police and Management*) was quantitative 3 (7.5%), 14 (45%) qualitative, and mixed methods 23 (57.5%). Journal Four (*Police Practice and Research*) was quantitative 1 (2.7%), qualitative 22 (59.5%), and mixed method 14 (37.8%). Journal Five *(Journal of Police and Criminal Psychology)* was quantitative 21 (75.0%), qualitative 3 (10.7%), and mixed method 4 (14.3%). An accumulative count for all five journals per method was 42 (22.7%) quantitative, 62 (33.5%) qualitative, and 81 (43.8%) mixed methods.

Table 17. RQ1 Frequency of Research Method per Journal

Journal	Journal Information	Research Method 1	Research Method 2	Research Method 3	Total
1	Count	16	8	16	40
	Expected Count	9.1	13.4	17.5	40.0
	% Within Journal	40.0%	20.0%	40.0%	100.0%
	% Within Research Method	38.1%	12.9%	19.8%	21.6%
	% of Total	8.6%	4.3%	8.6%	21.6%
2	Count	1	15	24	40
	Expected Count	9.1	13.4	17.5	40.0
	% Within Journal	2.5%	37.5%	60.0%	100.0%
	% Within Research Method	2.4%	24.2%	29.6%	21.6%
	% of Total	0.5%	8.1%	13.0%	21.6%
3	Count	3	14	23	40
	Expected Count	9.1	13.4	17.5	40.0
	% Within Journal	7.5%	35.0%	57.5%	100.0%
	% Within Research Method	7.1%	22.6%	28.4%	21.6%
	% of Total	1.6%	7.6%	12.4%	21.6%
4	Count	1	22	14	37
	Expected Count	8.4	12.4	16.2	37.0
	% Within Journal	2.7%	59.5%	37.8%	100.0%
	% Within Research Method	2.4%	35.5%	17.3%	20.0%
	% of Total	0.5%	11.9%	7.6%	20.0%
5	Count	21	3	4	28
	Expected Count	6.4	9.4	12.3	28.0
	% Within Journal	75.0%	10.7%	14.3%	100.0%
	% Within Research Method	50.0%	4.8%	4.9%	15.1%
	% of Total	11.4%	1.6%	2.2%	15.1%
Total	Count	42	62	81	185
	Expected Count	42.0	62.0	81.0	185.0
	% Within Journal	22.7%	33.5%	43.8%	100.0%
	% Within Research Method	100.0%	100.0%	100.0%	100.0%
	% of Total	22.7%	33.5%	43.8%	100.0%

Across the five journals, quantitative and qualitative were the most predominant research method used. Journals 2 (*Policing and Society*), 3 (*International Journal of Police and Management*) and 4 (*Police Practice and Research*) were consistent in the actual count versus the expected count related to the research methods used. These journals had higher counts for qualitative and mixed methods with quantitative method being the lowest. In Journal Five

(*Journal of Police and Criminal Psychology*) the quantitative method count 21 was significantly higher than the expected count 6.4. Journal 1 (*Police Quarterly*) had a higher count 16 than expected count 9.1 for quantitative method, a lower count 8 than an expected count 13.4 for qualitative, and a consistent count of 16 with an expected count of 17.5 for mixed method. These variances appear to account for the Pearson chi-square value of 81.072 as shown in Table 18.

Table 18. Chi-Square Tests, Research Method per Journal

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	81.072[a]	8	.000
Likelihood Ratio	79.434	8	.000
Linear-by-Linear Association	6.818	1	.009
N of Valid Cases	185		

[a.] 0 cells (0%) have expected count less than 5. The minimum expected count is 6.36.

When research method per article was analyzed per year over the five-year period, the following counts verses expected counts were identified, as illustrated in Table 19. Across all journals for the year 2010, examined articles yielded the following counts: quantitative 7 (22.6%), qualitative 13 (41.9%), and mixed methods 11 (35.5%). For the year 2011, quantitative 12 (29.3%), qualitative 11 (26.8%), and mixed methods 18 (43.9%). For the year 2012, quantitative 12 (30.8%), qualitative 11 (28.2%), and mixed methods 16 (41%). For the year 2013, quantitative 7 (17.9%), qualitative 15 (38.5%), and mixed methods 17 (43.6%). For the year 2014, quantitative 4 (11.4%), qualitative 12 (34.3%), and mixed methods 19 (54.3%).

Table 19. Research Method per Year

Journal	Journal Information	Research Method 1	Research Method 2	Research Method 3	Total
1	Count	7	13	11	31
	Expected Count	7.0	10.4	13.6	31.0
	% Within Journal	22.6%	41.9%	35.5%	100.0%
	% Within Research Method	16.7%	21.0%	13.6%	16.8%
	% of Total	3.8%	7.0%	5.9%	16.8%
2	Count	12	11	18	41
	Expected Count	9.3	13.7	18.0	41.0
	% Within Journal	29.3%	26.8%	43.9%	100.0%
	% Within Research Method	28.6%	17.7%	22.2%	22.2%
	% of Total	6.5%	5.9%	9.7%	22.2%
3	Count	12	11	16	39
	Expected Count	8.9	13.1	17.1	39.0
	% Within Journal	30.8%	28.2%	41.0%	100.0%
	% Within Research Method	28.6%	17.7%	19.8%	21.1%
	% of Total	6.5%	5.9%	8.6%	21.1%
4	Count	7	15	17	39
	Expected Count	8.9	13.1	17.1	39.0
	% Within Journal	17.9%	38.5%	43.6%	100.0%
	% Within Research Method	16.7%	24.2%	21.0%	21.1%
	% of Total	3.8%	8.1%	9.2%	21.1%
5	Count	4	12	19	35
	Expected Count	7.9	11.7	15.3	35.0
	% Within Journal	11.4%	34.3%	54.3%	100.0%
	% Within Research Method	9.5%	19.4%	23.5%	18.9%
	% of Total	2.2%	6.5%	10.3%	18.9%
Total	Count	42	62	81	185
	Expected Count	42.0	62.0	81.0	185.0
	% Within Journal	22.7%	33.5%	43.8%	100.0%
	% Within Research Method	100.0%	100.0%	100.0%	100.0%
	% of Total	22.7%	33.5%	43.8%	100.0%

Analysis of the research method per article per year indicated a chi-square value of 7.504. This value appears to reflect a more consistent application of the research methods applied for the five-year period (2010- 2014). The actual counts were closer to the expected counts in all methods across all five years, as illustrated in Table 20.

Table 20. Chi-Square Tests, Research Method per Year

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.504[a]	8	.483
Likelihood Ratio	7.766	8	.457
Linear-by-Linear Association	2.853	1	.091
N of Valid Cases	185		

[a.] 0 cells (0%) have expected count less than 5. The minimum expected count is 7.04.

RQ 2: What are the differences, if any, in research methods used in selected law enforcement refereed journal research articles over a five-year period based on selected attribute variable of author's/authors' sex?

A total of 427 authors were identified within the 185 research articles collected for this review. Each article ranged from one to six authors, with an average of two authors per article. Of the 185 first authors, 123 (66.5%) were male, and 62 (33.5%) were female. Of the 123 male first authors, 33 (26.8%) used quantitative methods in their research articles, 38 (30.9%) used qualitative methods of research, and 52 (42.3%) used mixed methods. Of the 62 total female first authors, 9 (14.5%) used quantitative, 24 (38.7%) used qualitative, and 29 (46.8%) used mixed methods. It appears a slightly lower than expected count of female first authors in comparison to male first authors used quantitative methods. Table 21 illustrates the first author's sex and selected research method.

Table 21. First Author's Sex and Selected Research Method

Method	Journal Information	Sex 1	Sex 2	Total
1	Count	33	9	42
	Expected Count	27.9	14.1	42.0
	% Within Journal	78.6%	21.4%	100.0%
	% Within Research Method	26.8%	14.5%	22.7%
	% of Total	17.8%	4.9%	22.7%
2	Count	38	24	62
	Expected Count	41.2	20.8	62.0
	% Within Journal	61.3%	38.7%	100.0%
	% Within Research Method	30.9%	38.7%	33.5%
	% of Total	20.5%	13.0%	33.5%
3	Count	52	29	81
	Expected Count	53.9	27.1	81.0
	% Within Journal	64.2%	35.8%	100.0%
	% Within Research Method	42.3%	46.8%	43.8%
	% of Total	28.1%	15.7%	43.8%
Total	Count	123	62	185
	Expected Count	123.0	62.0	185.0
	% Within Journal	66.5%	33.5%	100.0%
	% Within Research Method	100.0%	100.0%	100.0%
	% of Total	66.5%	33.5%	100.0%

Analysis of the first author's sex related to the research method used per article indicated a chi-square value of 3.695. This value appears to reflect a consistent value when comparing counts to expected counts of the sex of the first author, as demonstrated in Table 22.

Table 22. Chi-Square Tests, First Author's Sex and Selected Research Method

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.695[a]	2	.158
Likelihood Ratio	3.895	2	.143
Linear-by-Linear Association	1.868	1	.172
N of Valid Cases	185		

[a.] 0 cells (0%) have expected count less than 5. The minimum expected count is 14.08.

Of the 133 second authors, 84 (63.2%) were male, and 49 (36.8%) were female. Of the 133 male second authors, 25 (29.8%) used quantitative methods in their research articles, 20 (23.8%) used qualitative methods of research, and 39 (46.4%) used mixed methods. Of the 49 total female second authors, 12 (24.5%) used quantitative, 15 (30.6%) used qualitative, and 22 (44.9%) used mixed methods, as illustrated in the following table.

Table 23. Second Author's Sex and Selected Research Method

Method	Journal Information	Sex 1	Sex 2	Total
1	Count	25	12	37
	Expected Count	23.4	13.6	37.0
	% Within Journal	67.6%	32.4%	100.0%
	% Within Research Method	29.8%	24.5%	27.8%
	% of Total	18.8%	9.0%	27.8%
2	Count	20	15	35
	Expected Count	22.1	12.9	35.0
	% Within Journal	57.1%	42.9%	100.0%
	% Within Research Method	23.8%	30.6%	26.3%
	% of Total	15.0%	11.3%	26.3%
3	Count	39	22	61
	Expected Count	38.5	22.5	61.0
	% Within Journal	63.9%	36.1%	100.0%
	% Within Research Method	46.4%	44.9%	45.9%
	% of Total	29.3%	16.5%	45.9%
Total	Count	84	49	133
	Expected Count	84.0	49.0	133.0
	% Within Journal	63.2%	36.8%	100.0%
	% Within Research Method	100.0%	100.0%	100.0%
	% of Total	63.2%	36.8%	100.0%

Analysis of the second author's sex related to the research method used per article indicated a chi-square value of .869. This value appears to reflect a consistent value when comparing counts to expected counts of the sex of the second author, as illustrated in Table 24.

Table 24. Chi-Square Tests, Second Author's Sex and Selected Research Method

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.869[a]	2	.648
Likelihood Ratio	.864	2	.649
Linear-by-Linear Association	.061	1	.805
N of Valid Cases	133		

[a.] 0 cells (0%) have expected count less than 5. The minimum expected count is 12.89.

Of the 66 third authors, 44 (66.7%) were male, and 22 (33.3%) were female. Of the 66 male third authors, 16 (36.4%) used quantitative methods in their research articles, 9 (20.5%) used qualitative methods of research, and 19 (43.2%) used mixed methods. Of the 22 total female third authors, 7 (31.8%) used quantitative, 7 (31.8%) used qualitative, and 8 (36.4%) used mixed methods, as illustrated in Table 25.

Table 25. Third Author's Sex and Selected Research Method

Method	Journal Information	Sex 1	Sex 2	Total
1	Count	16	7	23
	Expected Count	15.3	7.7	23.0
	% Within Journal	69.6%	30.4%	100.0%
	% Within Research Method	36.4%	31.8%	34.8%
	% of Total	24.2%	10.6%	34.8%
2	Count	9	7	16
	Expected Count	10.7	5.3	16.0
	% Within Journal	56.3%	43.8%	100.0%
	% Within Research Method	20.5%	31.8%	24.2%
	% of Total	13.6%	10.6%	24.2%
3	Count	19	8	27
	Expected Count	18.0	9.0	27.0
	% Within Journal	70.4%	29.6%	100.0%
	% Within Research Method	43.2%	36.4%	40.9%
	% of Total	28.8%	12.1%	40.9%
Total	Count	44	22	66
	Expected Count	44.0	22.0	66.0
	% Within Journal	66.7%	33.3%	100.0%
	% Within Research Method	100.0%	100.0%	100.0%
	% of Total	66.7%	33.3%	100.0%

Analysis of the third author's sex related to the research method use per article indicated a chi-square value of 1.035. This value appears to reflect a consistent value when comparing counts to expected counts of the sex of the third author, as illustrated in Table 26.

Table 26. Chi-Square Tests, Third Author's Sex and Selected Research Method

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.035[a]	2	.596
Likelihood Ratio	1.007	2	.604
Linear-by-Linear Association	.010	1	.921
N of Valid Cases	66		

[a.] 0 cells (0%) have expected count less than 5. The minimum expected count is 5.33.

Of the 27 fourth authors, 20 (74.1%) were male, and 7 (25.9%) were female. Of the 27 male fourth authors, 4 (20%) used quantitative methods in their research articles, 5 (25%) used qualitative methods of research, and 11 (55%) used mixed methods. Of the 7 total female fourth authors, 4 (57.1%) used quantitative, 0 (0%) used qualitative, and 3 (42.9%) used mixed methods, as illustrated in Table 27.

Table 27. Fourth Author's Sex and Selected Research Method

Method	Journal Information	Sex 1	Sex 2	Total
1	Count	4	4	8
	Expected Count	5.9	2.1	8.0
	% Within Journal	50.0%	50.0%	100.0%
	% Within Research Method	20.0%	57.1%	29.6%
	% of Total	14.8%	14.8%	29.6%
2	Count	5	0	5
	Expected Count	3.7	1.3	5.0
	% Within Journal	100.0%	0.0%	100.0%
	% Within Research Method	25.0%	0.0%	18.5%
	% of Total	18.5%	0.0%	18.5%
3	Count	11	3	14
	Expected Count	10.4	3.6	14.0
	% Within Journal	78.6%	21.4%	100.0%
	% Within Research Method	55.0%	42.9%	51.9%
	% of Total	40.7%	11.1%	51.9%
Total	Count	20	7	27
	Expected Count	20.0	7.0	27.0
	% Within Journal	74.1%	25.9%	100.0%
	% Within Research Method	100.0%	100.0%	100.0%
	% of Total	74.1%	25.9%	100.0%

Analysis of the fourth author's sex related to the research method used per article indicated a chi-square value of 4.312. This value appears to reflect a consistent value when comparing counts to expected counts of the sex of the fourth author, as illustrated in Table 28.

Table 28. Chi-Square Tests, Fourth Author's Sex and Selected Research Method

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.312[a]	2	.116
Likelihood Ratio	5.265	2	.072
Linear-by-Linear Association	1.585	1	.208
N of Valid Cases	27		

[a.] 4 cells (66.7%) have expected count less than 5. The minimum expected count is 1.30.

Of the 11 fifth authors, 5 (45.5%) were male, and 6 (54.5%) were female. Of the 11 male fifth authors, 1 (20%) used quantitative methods, 2 (40%) authors used qualitative methods of research, and 2 (40%) used mixed methods. Of the 6 total female fifth authors, 2 (33.3%) used quantitative, 0 (0%) used qualitative, and 4 (66.7%) used mixed methods, as illustrated in Table 29.

Table 29. Fifth Author's Sex and Selected Research Method

Method	Journal Information	Sex 1	Sex 2	Total
1	Count	1	2	3
	Expected Count	1.4	1.6	3.0
	% Within Journal	33.3%	66.7%	100.0%
	% Within Research Method	20.0%	33.3%	27.3%
	% of Total	9.1%	18.2%	27.3%
2	Count	2	0	2
	Expected Count	.9	1.1	2.0
	% Within Journal	100.0%	0.0%	100.0%
	% Within Research Method	40.0%	0.0%	18.2%
	% of Total	18.2%	0.0%	18.2%
3	Count	2	4	6
	Expected Count	2.7	3.3	6.0
	% Within Journal	33.3%	66.7%	100.0%
	% Within Research Method	40.0%	66.7%	54.5%
	% of Total	18.2%	36.4%	54.5%
Total	Count	5	6	11
	Expected Count	5.0	6.0	11.0
	% Within Journal	45.5%	54.5%	100.0%
	% Within Research Method	100.0%	100.0%	100.0%
	% of Total	45.5%	54.5%	100.0%

Analysis of the fifth author's sex related to the research method used per article indicated a chi-square value of 2.933. This value appears to reflect a consistent value when comparing counts to expected counts of the sex of the fifth author, as indicated in Table 30.

Table 30. Chi-Square Tests, Fifth Author's Sex and Selected Research Method

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.933[a]	2	.231
Likelihood Ratio	3.701	2	.157
Linear-by-Linear Association	.059	1	.808
N of Valid Cases	11		

[a.] 6 cells (100.0%) have expected count less than 5. The minimum expected count is 0.91.

Of the 5 sixth authors, 1 (20%) was male and 4 (80%) were female. Of the 1 male sixth author, 1 (100%) used quantitative methods in his research articles, and 0 (0%) authors used qualitative or mixed method research. Of the 4 total female sixth authors, 2 (50%) used quantitative, 1 (25%) used qualitative, and 1 (25%) used mixed methods, as illustrated in Table 31 below.

Table 31. Sixth Author's Sex and Selected Research Method

Method	Journal Information	Sex 1	Sex 2	Total
1	Count	1	2	3
	Expected Count	.6	2.4	3.0
	% Within Journal	33.3%	66.7%	100.0%
	% Within Research Method	100.0%	50.0%	60.0%
	% of Total	20.0%	40.0%	60.0%
2	Count	0	1	1
	Expected Count	.2	.8	1.0
	% Within Journal	0.0%	100.0%	100.0%
	% Within Research Method	0.0%	25.0%	20.0%
	% of Total	0.0%	20.0%	20.0%
3	Count	0	1	1
	Expected Count	.2	.8	1.0
	% Within Journal	0.0%	100.0%	100.0%
	% Within Research Method	0.0%	25.0%	20.0%
	% of Total	0.0%	20.0%	20.0%
Total	Count	1	4	5
	Expected Count	1.0	4.0	5.0
	% Within Journal	20.0%	80.0%	100.0%
	% Within Research Method	100.0%	100.0%	100.0%
	% of Total	20.0%	80.0%	100.0%

Analysis of the sixth author's sex related to the research method used per article indicated a chi-square value of 0.833. This value appears to reflect a consistent value when comparing counts to expected counts of the sex of the sixth author, as illustrated in Table 32.

Table 32. Chi-Square Tests, Sixth Author's Sex and Selected Research Method

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.833[a]	2	.659
Likelihood Ratio	1.185	2	.553
Linear-by-Linear Association	.562	1	.453
N of Valid Cases	5		

[a.] 6 cells (100.0%) have expected count less than 5. The minimum expected count is 0.20.

RQ 3: What are the differences, if any, in research methods used in selected law enforcement refereed journal research articles over a five-year period based on selected attribute variable author's/authors' role/function?

Of the 185 research articles collected for this research, there were a total of 427 authors. All authors were examined for their role and/or function as it related to either an identifiable academic role/function, or a non–academic role/function in reference to the selected research method per article. Two first authors' and one second author's role/function were unidentifiable, which left *n* = 183 analyzed. Of the 183 first authors, 42 (23.0%) used quantitative methods, 61 (33.3%) used qualitative, and 80 (43.7%) used mixed methods research. Of 42 first authors who used quantitative methods, 35 (83.3%) had their role/function identified as academic and 7 (16.7%) first authors who used quantitative methods had their role/function identified as non-academic. Of 61 first authors that used qualitative methods, 33 (54.1%) were identified as academic, and 28 (45.9%) were identified as non-academic. Of 80 first authors who used mixed methods, 59 (73.8%) were identified as academic, and 21 (26.3%) were non-academic. Based on the data, approximately two thirds of the first authors had academic roles/functions, and approximately one third had non-academic roles/functions, as illustrated in Table 33.

Table 33. First Author's Role/Function and Selected Research Method

Method	Journal Information	Academic	Non-Academic	Total
1	Count	35	7	42
	Expected Count	29.1	12.9	42.0
	% Within Journal	83.3%	16.7%	100.0%
	% Within Research Method	27.6%	12.5%	23.0%
	% of Total	19.1%	3.8%	23.0%
2	Count	33	28	61
	Expected Count	42.3	18.7	61.0
	% Within Journal	54.1%	45.9%	100.0%
	% Within Research Method	26.0%	50.0%	33.3%
	% of Total	18.0%	15.3%	33.3%
3	Count	59	21	80
	Expected Count	55.5	24.5	80.0
	% Within Journal	73.8%	26.3%	100.0%
	% Within Research Method	46.5%	37.5%	43.7%
	% of Total	32.2%	11.5%	43.7%
Total	Count	127	56	183
	Expected Count	127.0	56.0	183.0
	% Within Journal	69.4%	30.6%	100.0%
	% Within Research Method	100.0%	100.0%	100.0%
	% of Total	69.4%	30.6%	100.0%

Analysis of the first author's role/function related to the research method used per article indicated a chi-square value of 11.278. This value appears to reflect a consistent value when comparing counts to expected counts of the role function of the first author, as illustrated in Table 34.

Table 34. Chi-Square Tests, First Author's Role/Function and Selected Research Method

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.278[a]	2	.004
Likelihood Ratio	11.303	2	.004
Linear-by-Linear Association	.231	1	.631
N of Valid Cases	183		

[a.] 0 cells (0%) have expected count less than 5. The minimum expected count is 12.85.

Of the 132 second authors, 37 (28.0%) used quantitative methods, 35 (26.5%) used qualitative, and 60 (45.5%) used mixed methods research. Of 37 second authors who used quantitative methods, 29 (78.4%) had their role/function identified as academic. A total of 8 (21.6%) second authors who used quantitative methods had their role/function identified as non-academic. Of 35 second authors that used qualitative methods, 27 (77.1%) were identified as academic, and 8 (22.9%) were identified as non-academic. Of 60 second authors who used mixed methods, 42 (70.0%) were identified as academic, and 18 (30.0%) were non-academic, as illustrated in Table 35.

Table 35. Second Author's Role/Function and Selected Research Method

Method	Journal Information	Academic	Non-Academic	Total
1	Count	29	8	37
	Expected Count	27.5	9.5	37.0
	% Within Journal	78.4%	21.6%	100.0%
	% Within Research Method	29.6%	23.5%	28.0%
	% of Total	22.0%	6.1%	28.0%
2	Count	27	8	35
	Expected Count	26.0	9.0	35.0
	% Within Journal	77.1%	22.9%	100.0%
	% Within Research Method	27.6%	23.5%	26.5%
	% of Total	20.5%	6.1%	26.5%
3	Count	42	18	60
	Expected Count	44.5	15.5	60.0
	% Within Journal	70.0%	30.0%	100.0%
	% Within Research Method	42.9%	52.9%	45.5%
	% of Total	31.8%	13.6%	45.5%
Total	Count	98	34	132
	Expected Count	98.0	34.0	132.0
	% Within Journal	74.2%	25.8%	100.0%
	% Within Research Method	100.0%	100.0%	100.0%
	% of Total	74.2%	25.8%	100.0%

Analysis of the second author's role/function related to the research method used per article indicated a chi-square value of 1.050. This value appears to reflect a consistent value when comparing counts to expected counts of the role function of the first author, as illustrated in Table 36.

Table 36. Chi-Square Tests, Second Author's Role/Function and Selected Research Method

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.050[a]	2	.592
Likelihood Ratio	1.048	2	.592
Linear-by-Linear Association	.927	1	.336
N of Valid Cases	132		

[a.] 0 cells (0%) have expected count less than 5. The minimum expected count is 9.02.

Of the 66 third authors, 23 (34.8%) used quantitative methods, 16 (24.2%) used qualitative, and 27 (40.9%) used mixed methods research. Of 23 third authors who used quantitative methods, 17 (39.5%) had their role/function identified as academic. The 6 (26.1%) third authors who used quantitative methods had their role/function identified as non-academic. Of 35 third authors that used qualitative methods, 8 (50.0%) were identified as academic, and 8 (50.0%) were identified as non-academic. Of 27 third authors who used mixed methods, 18 (66.7%) were identified as academic, and 8 (33.3%) were non-academic, as illustrated in Table 37.

Table 37. Third Author's Role/Function and Selected Research Method

Method	Journal Information	Academic	Non-Academic	Total
1	Count	17	6	23
	Expected Count	15.0	8.0	23.0
	% Within Journal	73.9%	26.1%	100.0%
	% Within Research Method	39.5%	26.1%	34.8%
	% of Total	25.8%	9.1%	34.8%
2	Count	8	8	16
	Expected Count	10.4	5.6	16.0
	% Within Journal	50.0%	50.0%	100.0%
	% Within Research Method	18.6%	34.8%	24.2%
	% of Total	12.1%	12.1%	24.2%
3	Count	18	9	27
	Expected Count	17.6	9.4	27.0
	% Within Journal	66.7%	33.3%	100.0%
	% Within Research Method	41.9%	39.1%	40.9%
	% of Total	27.3%	13.6%	40.9%
Total	Count	43	23	66
	Expected Count	43.0	23.0	66.0
	% Within Journal	65.2%	34.8%	100.0%
	% Within Research Method	100.0%	100.0%	100.0%
	% of Total	65.2%	34.8%	100.0%

Analysis of the third author's role/function related to the research method used per article indicated a chi-square value of 2.423. This value appears to reflect a consistent value when comparing counts to expected counts of the role function of the first author, as illustrated in Table 38.

Table 38. Chi-Square Tests, Third Author's Role/Function and Selected Research Method

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.423a	2	.298
Likelihood Ratio	2.384	2	.304
Linear-by-Linear Association	.225	1	.635
N of Valid Cases	66		

[a.] 0 cells (0%) have expected count less than 5. The minimum expected count is 5.58.

Of the 27 fourth authors, 8 (29.6%) used quantitative methods, 5 (18.5%) used qualitative, and 14 (51.9%) used mixed methods research. Of 8 fourth authors who used quantitative methods, 7 (87.5%) had their role/function identified as academic. The 1 (12.5%) fourth author who used quantitative methods had the role/function identified as non-academic. Of 5 fourth authors that used qualitative methods, 3 (60.0%) were identified as academic, and 2 (40%) were identified as non-academic. Of 14 fourth authors who used mixed methods, 8 (57.1%) were identified as academic, and 6 (42.9%) were non-academic, as illustrated in Table 39.

Table 39. Fourth Author's Role/Function and Selected Research Method

Method	Journal Information	Academic	Non-Academic	Total
1	Count	7	1	8
	Expected Count	5.3	2.7	8.0
	% Within Journal	87.5%	12.5%	100.0%
	% Within Research Method	38.9%	11.1%	29.6%
	% of Total	25.9%	3.7%	29.6%
2	Count	3	2	5
	Expected Count	3.3	1.7	5.0
	% Within Journal	60.0%	40.0%	100.0%
	% Within Research Method	16.7%	22.2%	18.5%
	% of Total	11.1%	7.4%	18.5%
3	Count	8	6	14
	Expected Count	9.3	4.7	14.0
	% Within Journal	57.1%	42.9%	100.0%
	% Within Research Method	44.4%	66.7%	51.9%
	% of Total	29.6%	22.2%	51.9%
Total	Count	18	9	27
	Expected Count	18.0	9.0	27.0
	% Within Journal	66.7%	33.3%	100.0%
	% Within Research Method	100.0%	100.0%	100.0%
	% of Total	66.7%	33.3%	100.0%

Analysis of the fourth author's role/function related to the research method used per article indicated a chi-square value of 2.234. This value appears to reflect a consistent value when comparing counts to expected counts of the role function of the fourth author, as illustrated in Table 40.

Table 40. Chi-Square Tests, Fourth Author's Role/Function and Selected Research Method

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.234[a]	2	.327
Likelihood Ratio	2.492	2	.288
Linear-by-Linear Association	1.887	1	.170
N of Valid Cases	27		

[a.] 4 cells (66.7%) have expected count less than 5. The minimum expected count is 1.67.

Of the 11 fifth authors, 3 (27.3%) used quantitative methods, 2 (18.2%) used qualitative, and 6 (54.5%) used mixed methods research. Of 3 fifth authors who used quantitative methods, 1 (33.3%) had a role/function identified as academic. The 2 (66.7%) fourth authors who used quantitative methods had their role/function identified as non-academic. Of 2 fifth authors that used qualitative methods, both (100%) were identified as academic, and 0 (0%) were identified as non-academic. Of 6 fifth authors who used mixed methods, 2 (33.3%) were identified as academic, and 4 (66.7%) were non-academic, as illustrated in Table 41.

Table 41. Fifth Author's Role/Function and Selected Research Method

Method	Journal Information	Academic	Non-Academic	Total
1	Count	1	2	3
	Expected Count	1.4	1.6	3.0
	% Within Journal	33.3%	66.7%	100.0%
	% Within Research Method	20.0%	33.3%	27.3%
	% of Total	9.1%	18.2%	27.3%
2	Count	2	0	2
	Expected Count	.9	1.1	2.0
	% Within Journal	100.0%	0.0%	100.0%
	% Within Research Method	40.0%	0.0%	18.2%
	% of Total	18.2%	0.0%	18.2%
3	Count	2	4	6
	Expected Count	2.7	3.3	6.0
	% Within Journal	33.3%	66.7%	100.0%
	% Within Research Method	40.0%	66.7%	54.5%
	% of Total	18.2%	36.4%	54.5%
Total	Count	5	6	11
	Expected Count	5.0	6.0	11.0
	% Within Journal	45.5%	54.5%	100.0%
	% Within Research Method	100.0%	100.0%	100.0%
	% of Total	45.5%	54.5%	100.0%

Analysis of the fifth author's role/function related to the research method used per article indicated a chi-square value of 2.933. This value appears to reflect a consistent value when comparing counts to expected counts of the role function of the fifth author, as illustrated in Table 42.

Table 42. Chi-Square Tests, Fifth Author's Role/Function and Selected Research Method

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.933[a]	2	.231
Likelihood Ratio	3.701	2	.157
Linear-by-Linear Association	.059	1	.808
N of Valid Cases	11		

[a.] 6 cells (100%) have expected count less than 5. The minimum expected count is 0.91.

Of the 5 sixth authors, 3 (60.0%) used quantitative methods, 1 (20.0%) used qualitative, and 1 (20.0%) used mixed methods research. Of the 3 sixth authors who used quantitative methods, 2 (66.7%) had their role/function identified as academic. The 1 (33.3%) sixth author who used quantitative methods had a role/function identified as non-academic. Of 1 sixth author that used qualitative methods, 1 (100.0%) was identified as academic, and 0 (0%) was identified as non-academic. Of 1 sixth author who used mixed methods, 1 (100.0%) was identified as academic, and 0 (0%) was non-academic, as illustrated in Table 43.

Table 43. Sixth Author's Role/Function and Selected Research Method

Method	Journal Information	Academic	Non-Academic	Total
1	Count	2	1	3
	Expected Count	2.4	.6	3.0
	% Within Journal	66.7%	33.3%	100.0%
	% Within Research Method	50.0%	100.0%	60.0%
	% of Total	40.0%	20.0%	60.0%
2	Count	1	0	1
	Expected Count	.8	.2	1.0
	% Within Journal	100.0%	0.0%	100.0%
	% Within Research Method	25.0%	0.0%	20.0%
	% of Total	20.0%	0.0%	20.0%
3	Count	1	0	1
	Expected Count	.8	.2	1.0
	% Within Journal	100.0%	0.0%	100.0%
	% Within Research Method	25.0%	0.0%	20.0%
	% of Total	20.0%	0.0%	20.0%
Total	Count	4	1	5
	Expected Count	4.0	1.0	5.0
	% Within Journal	80.0%	20.0%	100.0%
	% Within Research Method	100.0%	100.0%	100.0%
	% of Total	80.0%	20.0%	100.0%

Analysis of the sixth author's role/function related to the research method used per article indicated a chi-square value of 0.833. This value appears to reflect a consistent value when comparing counts to expected counts of the role function of the sixth author, as illustrated in Table 44.

Table 44. Chi-Square Tests, Sixth Author's Role/Function and Selected Research Method

Description	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.833[a]	2	.659
Likelihood Ratio	1.185	2	.553
Linear-by-Linear Association	.563	1	.453
N of Valid Cases	5		

[a.] 6 cells (100%) have expected count less than 5. The minimum expected count is 0.20.

RQ 4: What five-year trends, if any, are identifiable from the analysis of selected law enforcement refereed journal research articles based on the journal, author's/authors' sex, or author's/authors' role/function?

The methodology over the five-year time period as it appears when reviewed by journal indicated that journal 5 (*Police and Criminal Psychology*), appeared to favor quantitative research methods in its acceptance for article publication, as illustrated in Table 16. However, in reviewing the data specific to year and research method over the selected five-year period, the research revealed there was little difference in the research methods used per year, as demonstrated in Table 18.

Over the five year period, the author's sex and utilized research method basically reflected a two to one ratio. Approximately 66.5% of authors were male, and 33.5% were female when analyzing the data of authors' sex and research method used. There were no noticeable significance variances when the year by year data were reviewed, as illustrated in Tables 45-50.

Table 45. Author's Sex and Research Method, 2010

Research Method	Journal Information	Sex 1	Sex 2	Total
1	Count	5	2	7
	Expected Count	5.6	1.4	7.0
	% Within Research Method	71.4%	28.6%	100.0%
	% Within Sex 1	20.0%	33.3%	22.6%
	% of Total	16.1%	6.5%	22.6%
2	Count	11	2	13
	Expected Count	10.5	2.5	13.0
	% Within Research Method	84.6%	15.4%	100.0%
	% Within Sex 1	44.0%	33.3%	41.9%
	% of Total	35.5%	6.5%	41.9%
3	Count	9	2	11
	Expected Count	8.9	2.1	11.0
	% Within Research Method	81.8%	18.2%	100.0%
	% Within Sex 1	36.0%	33.3%	35.5%
	% of Total	29.0%	6.5%	35.5%
Total	Count	25	6	31
	Expected Count	25.0	6.0	31.0
	% Within Research Method	80.6%	19.4%	100.0%
	% Within Sex 1	100.0%	100.0%	100.0%
	% of Total	80.6%	19.4%	100.0%

Table 46. Author's Sex and Research Method, 2011

Research Method	Journal Information	Sex 1	Sex 2	Total
1	Count	9	3	12
	Expected Count	7.9	4.1	12.0
	% Within Research Method	75.0%	25.0%	100.0%
	% Within Sex 1	33.3%	21.4%	29.3%
	% of Total	22.0%	7.3%	29.3%
2	Count	7	4	11
	Expected Count	7.2	3.8	11.0
	% Within Research Method	63.6%	36.4%	100.0%
	% Within Sex 1	25.9%	28.6%	26.8%
	% of Total	17.1%	9.8%	26.8%
3	Count	11	7	18
	Expected Count	11.9	6.1	18.0
	% Within Research Method	61.1%	38.9%	100.0%
	% Within Sex 1	40.7%	50.0%	43.9%
	% of Total	26.8%	17.1%	43.9%
Total	Count	27	14	41
	Expected Count	27.0	14.0	41.0
	% Within Research Method	65.9%	34.1%	100.0%
	% Within Sex 1	100.0%	100.0%	100.0%
	% of Total	65.9%	34.1%	100.0%

Table 47. Author's Sex and Research Method, 2012

Research Method	Journal Information	Sex 1	Sex 2	Total
1	Count	10	2	12
	Expected Count	8.3	3.7	12.0
	% Within Research Method	83.3%	16.7%	100.0%
	% Within Sex 1	37.0%	16.7%	30.8%
	% of Total	25.6%	5.1%	30.8%
2	Count	6	5	11
	Expected Count	7.6	3.4	11.0
	% Within Research Method	54.5%	45.5%	100.0%
	% Within Sex 1	22.2%	41.7%	28.2%
	% of Total	15.4%	12.8%	28.2%
3	Count	11	5	16
	Expected Count	11.1	4.9	16.0
	% Within Research Method	68.8%	31.3%	100.0%
	% Within Sex 1	40.7%	41.7%	41.0%
	% of Total	28.2%	12.8%	41.0%
Total	Count	27	12	39
	Expected Count	27.0	12.0	39.0
	% Within Research Method	69.2%	30.8%	100.0%
	% Within Sex 1	100.0%	100.0%	100.0%
	% of Total	69.2%	30.8%	100.0%

Table 48. Author's Sex and Research Method, 2013

Research Method	Journal Information	Sex 1	Sex 2	Total
1	Count	5	2	7
	Expected Count	3.9	3.1	7.0
	% Within Research Method	71.4%	28.6%	100.0%
	% Within Sex 1	22.7%	11.8%	17.9%
	% of Total	12.8%	5.1%	17.9%
2	Count	7	8	15
	Expected Count	8.5	6.5	15.0
	% Within Research Method	46.7%	53.3%	100.0%
	% Within Sex 1	31.8%	47.1%	38.5%
	% of Total	17.9%	20.5%	38.5%
3	Count	10	7	17
	Expected Count	9.6	7.4	17.0
	% Within Research Method	58.8%	41.2%	100.0%
	% Within Sex 1	45.5%	41.2%	43.6%
	% of Total	25.6%	17.9%	43.6%
Total	Count	22	17	39
	Expected Count	22.0	17.0	39.0
	% Within Research Method	56.4%	43.6%	100.0%
	% Within Sex 1	100.0%	100.0%	100.0%
	% of Total	56.4%	43.6%	100.0%

Table 49. Author's Sex and Research Method, 2014

Research Method	Journal Information	Sex 1	Sex 2	Total
1	Count	4	0	4
	Expected Count	2.5	1.5	4.0
	% Within Research Method	100.0%	0.0%	100.0%
	% Within Sex 1	18.2%	0.0%	11.4%
	% of Total	11.4%	0.0%	11.4%
2	Count	7	5	12
	Expected Count	7.5	4.5	12.0
	% Within Research Method	58.3%	41.7%	100.0%
	% Within Sex 1	31.8%	38.5%	34.3%
	% of Total	20.0%	14.3%	34.3%
3	Count	11	8	19
	Expected Count	11.9	7.1	19.0
	% Within Research Method	57.9%	42.1%	100.0%
	% Within Sex 1	50.0%	61.5%	54.3%
	% of Total	31.4%	22.9%	54.3%
Total	Count	22	13	35
	Expected Count	22.0	13.0	35.0
	% Within Research Method	62.9%	37.1%	100.0%
	% Within Sex 1	100.0%	100.0%	100.0%
	% of Total	62.9%	37.1%	100.0%

Table 50. Author's Sex and Research Method, 2010-2014 Totals

Research Method	Journal Information	Sex 1	Sex 2	Total
1	Count	33	9	42
	Expected Count	27.9	14.1	42.0
	% Within Research Method	78.6%	21.4%	100.0%
	% Within Sex 1	26.8%	14.5%	22.7%
	% of Total	17.8%	4.9%	22.7%
2	Count	38	24	62
	Expected Count	41.2	20.8	62.0
	% Within Research Method	61.3%	38.7%	100.0%
	% Within Sex 1	30.9%	38.7%	33.5%
	% of Total	20.5%	13.0%	33.5%
3	Count	52	29	81
	Expected Count	53.9	27.1	81.0
	% Within Research Method	64.2%	35.8%	100.0%
	% Within Sex 1	42.3%	46.8%	43.8%
	% of Total	28.1%	15.7%	43.8%
Total	Count	123	62	185
	Expected Count	123.0	62.0	185.0
	% Within Research Method	66.5%	33.5%	100.0%
	% Within Sex 1	100.0%	100.0%	100.0%
	% of Total	66.5%	33.5%	100.0%

Analysis of the author's sex and research method, 2010- 2014, per year, indicated a total chi-square value of 3.695. This value appears to reflect a consistent value when comparing counts to expected counts of the author's sex and research method, 2010- 2014, as illustrated in Table 51.

Table 51. Chi-Square Tests, Author's Sex and Research Method, 2010-2014

Year	Description	Value	df	Asymp. Sig. (2-sided)
1	Pearson Chi-Square	.522[b]	2	.770
	Likelihood Ratio	.493	2	.782
	Linear-by-Linear Association	.213	1	.645
	N of Valid Cases	31		
2	Pearson Chi-Square	.651[c]	2	.722
	Likelihood Ratio	.671	2	.715
	Linear-by-Linear Association	.567	1	.451
	N of Valid Cases	41		
3	Pearson Chi-Square	2.236[d]	2	.327
	Likelihood Ratio	2.298	2	.317
	Linear-by-Linear Association	.519	1	.471
	N of Valid Cases	39		
4	Pearson Chi-Square	1.262[e]	2	.532
	Likelihood Ratio	1.284	2	.526
	Linear-by-Linear Association	.076	1	.783
	N of Valid Cases	39		
5	Pearson Chi-Square	2.669[f]	2	.263
	Likelihood Ratio	4.015	2	.134
	Linear-by-Linear Association	1.481	1	.224
	N of Valid Cases	35		
Total	Pearson Chi-Square	3.695[a]	2	.158
	Likelihood Ratio	3.895	2	.143
	Linear-by-Linear Association	1.868	1	.172
	N of Valid Cases	185		

[a.] 0 cells (0%) have expected count less than 5. The minimum expected count is 14.08.

[b.] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.35.

[c.] 2 cells (33.3%) have expected count less than 5. The minimum expected count is 3.76.

[d.] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 3.38.

[e.] 2 cells (33.3%) have expected count less than 5. The minimum expected count is 3.05.

[f.] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.49.

No noticeable trend emerged within the data analyzed over the five year period, 2010-2014, in relationship to the author's/authors' role/function related to research method used, as illustrated in Tables 52-57.

Table 52. Author's Role/Function Related to Research Method Used, 2010

Research Method	Journal Information	Academic Role 1	Non-Academic Role 2	Total
1	Count	7	0	7
	Expected Count	5.6	1.4	7.0
	% Within Research Method	100.0%	0.0%	100.0%
	% Within Academic Role 1	29.2%	0.0%	23.3%
	% of Total	23.3%	0.0%	23.3%
2	Count	8	4	12
	Expected Count	9.6	2.4	12.0
	% Within Research Method	66.7%	33.3%	100.0%
	% Within Academic Role 1	33.3%	66.7%	40.0%
	% of Total	26.7%	13.3%	40.0%
3	Count	9	2	11
	Expected Count	8.8	2.2	11.0
	% Within Research Method	81.8%	18.2%	100.0%
	% Within Academic Role 1	37.5%	33.3%	36.7%
	% of Total	30.0%	6.7%	36.7%
Total	Count	24	6	30
	Expected Count	24.0	6.0	30.0
	% Within Research Method	80.0%	20.0%	100.0%
	% Within Academic Role 1	100.0%	100.0%	100.0%
	% of Total	80.0%	20.0%	100.0%

Table 53. Author's Role/Function Related to Research Method Used, 2011

Research Method	Journal Information	Academic Role 1	Non-Academic Role 2	Total
1	Count	10	2	12
	Expected Count	7.6	4.4	12.0
	% Within Research Method	83.3%	16.7%	100.0%
	% Within Academic Role 1	38.5%	13.3%	29.3%
	% of Total	24.4%	4.9%	29.3%
2	Count	5	6	11
	Expected Count	7.0	4.0	11.0
	% Within Research Method	45.5%	54.5%	100.0%
	% Within Academic Role 1	19.2%	40.0%	26.8%
	% of Total	12.2%	14.6%	26.8%
3	Count	11	7	18
	Expected Count	11.4	6.6	18.0
	% Within Research Method	61.1%	38.9%	100.0%
	% Within Academic Role 1	42.3%	46.7%	43.9%
	% of Total	26.8%	17.1%	43.9%
Total	Count	26	15	41
	Expected Count	26.0	15.0	41.0
	% Within Research Method	63.4%	36.6%	100.0%
	% Within Academic Role 1	100.0%	100.0%	100.0%
	% of Total	63.4%	36.6%	100.0%

Table 54. Author's Role/Function Related to Research Method Used, 2012

Research Method	Journal Information	Academic Role 1	Non-Academic Role 2	Total
1	Count	7	5	12
	Expected Count	6.8	5.2	12.0
	% Within Research Method	58.3%	41.7%	100.0%
	% Within Academic Role 1	31.8%	29.4%	30.8%
	% of Total	17.9%	12.8%	30.8%
2	Count	5	6	11
	Expected Count	6.2	4.8	11.0
	% Within Research Method	45.5%	54.5%	100.0%
	% Within Academic Role 1	22.7%	35.3%	28.2%
	% of Total	12.8%	15.4%	28.2%
3	Count	10	6	16
	Expected Count	9.0	7.0	16.0
	% Within Research Method	62.5%	37.5%	100.0%
	% Within Academic Role 1	45.5%	35.3%	41.0%
	% of Total	25.6%	15.4%	41.0%
Total	Count	22	17	39
	Expected Count	22.0	17.0	39.0
	% Within Research Method	56.4%	43.6%	100.0%
	% Within Academic Role 1	100.0%	100.0%	100.0%
	% of Total	56.4%	43.6%	100.0%

Table 55. Author's Role/Function Related to Research Method Used, 2013

Research Method	Journal Information	Academic Role 1	Non-Academic Role 2	Total
1	Count	7	0	7
	Expected Count	5.7	1.3	7.0
	% Within Research Method	100.0%	0.0%	100.0%
	% Within Academic Role 1	22.6%	0.0%	18.4%
	% of Total	18.4%	0.0%	18.4%
2	Count	10	5	15
	Expected Count	12.2	2.8	15.0
	% Within Research Method	66.7%	33.3%	100.0%
	% Within Academic Role 1	32.3%	71.4%	39.5%
	% of Total	26.3%	13.2%	39.5%
3	Count	14	2	16
	Expected Count	13.1	2.9	16.0
	% Within Research Method	87.5%	12.5%	100.0%
	% Within Academic Role 1	45.2%	28.6%	42.1%
	% of Total	36.8%	5.3%	42.1%
Total	Count	31	7	38
	Expected Count	31.0	7.0	38.0
	% Within Research Method	81.6%	18.4%	100.0%
	% Within Academic Role 1	100.0%	100.0%	100.0%
	% of Total	81.6%	18.4%	100.0%

Table 56. Author's Role/Function Related to Research Method Used, 2014

Research Method	Journal Information	Academic Role 1	Non-Academic Role 2	Total
1	Count	4	0	4
	Expected Count	2.7	1.3	4.0
	% Within Research Method	100.0%	0.0%	100.0%
	% Within Academic Role 1	16.7%	0.0%	11.4%
	% of Total	11.4%	0.0%	11.4%
2	Count	5	7	12
	Expected Count	8.2	3.8	12.0
	% Within Research Method	41.7%	58.3%	100.0%
	% Within Academic Role 1	20.8%	63.6%	34.3%
	% of Total	14.3%	20.0%	34.3%
3	Count	15	4	19
	Expected Count	13.0	6.0	19.0
	% Within Research Method	78.9%	21.1%	100.0%
	% Within Academic Role 1	62.5%	36.4%	54.3%
	% of Total	42.9%	11.4%	54.3%
Total	Count	24	11	35
	Expected Count	24.0	11.0	35.0
	% Within Research Method	68.6%	31.4%	100.0%
	% Within Academic Role 1	100.0%	100.0%	100.0%
	% of Total	68.6%	31.4%	100.0%

Table 57. Author's Role/Function Related to Research Method Used, 2010-2014 Totals

Research Method	Journal Information	Academic Role 1	Non-Academic Role 2	Total
1	Count	35	7	42
	Expected Count	29.1	12.9	42.0
	% Within Research Method	83.3%	16.7%	100.0%
	% Within Academic Role 1	27.6%	12.5%	23.0%
	% of Total	19.1%	3.8%	23.0%
2	Count	33	28	61
	Expected Count	42.3	18.7	61.0
	% Within Research Method	54.1%	45.9%	100.0%
	% Within Academic Role 1	26.0%	50.0%	33.3%
	% of Total	18.0%	15.3%	33.3%
3	Count	59	21	80
	Expected Count	55.5	24.5	80.0
	% Within Research Method	73.8%	26.3%	100.0%
	% Within Academic Role 1	46.5%	37.5%	43.7%
	% of Total	32.2%	11.5%	43.7%
Total	Count	127	56	183
	Expected Count	127.0	56.0	183.0
	% Within Research Method	69.4%	30.6%	100.0%
	% Within Academic Role 1	100.0%	100.0%	100.0%
	% of Total	69.4%	30.6%	100.0%

Analysis of the author's role/function to research method, 2010- 2014, per year, indicated a total chi-square value of 11.278. This value appears to reflect a consistent value when comparing counts to expected counts for the author's role/function to research method, 2010-2014, as illustrated in Table 58.

Table 58. Chi-Square Tests, Author's Role/Function Related to Research Method Used, 2010-2014

Year	Description	Value	df	Asymp. Sig. (2-sided)
1	Pearson Chi-Square	3.106[b]	2	.212
	Likelihood Ratio	4.317	2	.116
	Linear-by-Linear Association	.498	1	.480
	N of Valid Cases	30		
2	Pearson Chi-Square	3.623[c]	2	.163
	Likelihood Ratio	3.822	2	.148
	Linear-by-Linear Association	1.136	1	.286
	N of Valid Cases	41		
3	Pearson Chi-Square	.796[d]	2	.672
	Likelihood Ratio	.794	2	.672
	Linear-by-Linear Association	.079	1	.778
	N of Valid Cases	39		
4	Pearson Chi-Square	4.174[e]	2	.124
	Likelihood Ratio	5.155	2	.076
	Linear-by-Linear Association	.036	1	.849
	N of Valid Cases	38		
5	Pearson Chi-Square	6.813[f]	2	.033
	Likelihood Ratio	7.717	2	.021
	Linear-by-Linear Association	.139	1	.709
	N of Valid Cases	35		
Total	Pearson Chi-Square	11.278[a]	2	.004
	Likelihood Ratio	11.303	2	.004
	Linear-by-Linear Association	.231	1	.631
	N of Valid Cases	183		

[a.] 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.85.

[b.] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.40.

[c.] 2 cells (33.3%) have expected count less than 5. The minimum expected count is 4.02.

[d.] 1 cells (16.7%) have expected count less than 5. The minimum expected count is 4.79.

[e.] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.29.

[f.] 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.26.

Summary

In review of the data relating to the study's four research questions, the data appear to suggest the following insights. One, professional journals and preferred research method per article seem to be consistent in the use of the three research methods, quantitative, qualitative and mixed methods. Two, the data related to the author's sex suggest that twice as many males as females are authoring research articles in law enforcement research journals. Three, the data related to the author's role/function suggest that two thirds of the authors were academicians versus those authors who had non-academic role/functions.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Purpose of the Study

The purpose of this study was to provide a descriptive analysis of five peer-reviewed journals related to various law enforcement topics within a five-year period, 2010-2014. It determined the type of research methodology that was applied and specified the authors' characteristics of sex and role/function for all research-related articles selected from the five peer-reviewed journals published during this time period.

Target Data

The five journals analyzed in this study were *International Journal of Police Science and Management, The Official Journal of the Society for Police Criminal Psychology, Police Practice and Research, Policing and Society, and Police Quarterly.* [See Appendix B for a description of each journal.] This descriptive study will provide practitioners, academicians, and other invested entities with data in formulating decisions related to future research needs in the field of law enforcement.

A total of 185 research articles and 427 authors were included in the study. Each article ranged from one to six authors, with an average of two authors per article. For the 185 articles, there were 185 first authors, 133 second authors, 66 third authors, 27 fourth authors, 11 fifth authors, and 5 sixth authors. Of the 185 research articles collected for this research, there were a total of 427 authors. Of the 185 first authors, 123 were male, and 62 were female.

All authors were examined for their role and/or function as related to either a) an identifiable academic role/function, or b) a non–academic role/function as it correlated to the

selected research method per article. Two author's role/function were unidentifiable, which left n=183 analyzed.

Methods

The main method of research applied in this study was mixed method. Qualitative research was applied in coding the data from each selected journal. Descriptive analysis of the variables related to the predominant research method per article, authors' sex, and authors' role/function was completed.

The characteristics included journal volume, issue and year, title of article, number of authors, number of pages, sex of authors, and role/function of authors. Characteristics and variables were coded using Excel spreadsheets. SPSS (Version 24) was used to test level of significance for each research question and characteristics.

Study Limitations

This study's main limitations related to the selection of journals to be included. The journals selected for this study were from scholarly publications of law enforcement over a five-year period. Different journals and a different time frame of selection may produce different outcomes. Generalization of the findings of this study was not determined. The journals used in this study are available through both hard copy and electronic media.

Findings

Four research questions were associated with this study:

1. What research method is used in selected law enforcement refereed journal research articles over a five-year period?

2. What are the differences, if any, in research methods used in selected law enforcement refereed journal research articles over a five-year period based on the selected attribute variable author's/authors' sex?
3. What are the differences, if any, in research methods used in selected law enforcement refereed journal research articles over a five-year period based on the selected attribute variable author's/authors' role/function?
4. What five years trends, if any, are identifiable from the analysis of selected law enforcement refereed journal research articles based on the journal, author's/authors' sex, or author's/authors' role/function?

Research Question 1

What research method is used in selected law enforcement refereed journal research articles over a five-year period?

Research Question 1 examined the research method used in the 185 articles. When comparing the research method used per article to journal, significant differences were noted. When reviewing the research method used per year, some significant differences appeared, but fewer than the journal-to-method comparison. However, when reviewing the overall results of the method-to-method comparison, the results revealed a significant difference between the use of quantitative (22.7%) and mixed methods (43.3%) studies. In addition, a minimal difference emerged between the use of qualitative (33.5%) and mixed methods (43.3%) and quantitative (22.7%) and qualitative (33.5%) methods. This study did not investigate the reason or decision for using a type of research method by the author(s) or the selection process of journal editorial boards. The higher percentages of articles using qualitative and mixed methods research during the five-year period of this study (2010-2014) seems to be reflective of the use of these methods

across various disciplines (Lopez-Fernandez & Molina-Azorin, 2014). These findings suggest some areas of focus for future studies that would be specific to research method selection by authors and criteria used for article acceptance by editorial boards.

Research Question 2

What are the differences, if any, in research methods used in selected law enforcement refereed journal research articles over a five-year period based on selected attribute variable author's/authors' sex?

A total of 427 authors were identified within the 185 research articles collected for this study. Each article ranged from one to six authors, with an average of two authors per article. Of the total, 277 (64.6%) authors were males, and 150 (35.4%) were females. These data suggest the need for more female authors, across all research methods (Bendels, Müller, Brueggmann, & Groneberg, 2018).

Research Question 3

What are the differences, if any, in research methods used in selected law enforcement refereed journal research articles over a five-year period based on selected attribute variable author's/authors' role/function?

Of the 424 authors, a significant difference appeared in the number of authors whose role/function were related to academics (69.3%) when compared to non-academic/other role function authors (30.7%). This finding would suggest that more non-academic based researchers should be encouraged to contribute to peer-reviewed law enforcement research journals. Collaborative research initiatives between academicians and profession-based individuals at all levels of law enforcement (local, state, national, international) should be encouraged (Spivak, 2018).

Research Question 4

What five-year trends, if any, are identifiable from the analysis of selected law enforcement refereed journal research articles based on the journal, author's/authors' sex or author's/authors' role/function?

As previously stated, consistent trends emerged of significantly more male authors and significantly more academician roles/functions of authors related to the research articles published during the five-year period. The data review suggested that mixed method research is the predominate method of choice of published peer-reviewed research articles. This trend seems likely to continue, given the societal changes and issues facing the current profession of law enforcement. Mixed methods research allows for researchers and authors to have flexibility when studying the complexity of these changes and issues. Law enforcement professionals are confronted more and more in contemporary society with issues that involve understanding the human condition. Law enforcement professionals are tasked with problem solving regarding an array of dynamics producing crimes and threats to the citizenry they are charged with protecting (Police Executive Research Forum, 2014).

Implications for Future Studies and Summary

As stated previously, the challenges facing the field of Law Enforcement are constantly evolving and becoming more complex. In order to better understand these challenges and to assist in developing effective strategies and proactive/preventive measures resulting in more positive outcomes, structured research conducted by invested professionals at all levels must be encouraged and funded. This study illustrates the need for more collaborative research involving more female authors, from both academia and the field of Law Enforcement at all levels. Quantitative research will continue to be a necessary and informative method in studying

specific issues. However, given the issues and challenges facing the profession, the use of qualitative, mixed, or newly-developed research methods should be considered by potential authors/researchers in their future studies.

REFERENCES

Anderson, C. (2010). Presenting and evaluating qualitative research. *American Journal of Pharmaceutical Education 74*(8). Retrieved from https://www.ajpe.org/doi/full/10.5688/aj7408141

Bauer, M., Haesler, E., & Fetherstonhaugh, D. (2016). Let's talk about sex: Older people's views on the recognition of sexuality and sexual health in the health-care setting. *Health Expectations, 19*(6), 1237-1250. doi:10.1111/hex.12418

Bendels M. H. K., Müller, R., Brueggmann, D., & Groneberg, D. A. (2018). Gender disparities in high-quality research revealed by Nature Index journals. *PLOS ONE 13*(1): doi: 10.1371/journal.pone.0189136

Boeren, E. (2018). The methodological underdog: A review of quantitative research in the key adult education journals. *Adult Education Quarterly, 68*(1), 63-79. doi:10.1177/0741713617739347

Bogdan, C. R. & Biklen, S. K. (2007). *Qualitative research for education: An introduction to theory and methods* (5th ed.). Boston, MA: Allyn & Bacon.

Buchanan, L., Kelly, B., & Yeatman, H. (2017). Exposure to digital marketing enhances young adults' interest in energy drinks: An exploratory investigation. *PLOS ONE, 12*(2), 1-16. doi:10.1371/journal.pone.0171226.

California Polytechnic State University, Robert E. Kennedy Library (2018). *Find peer-reviewed articles.* Retrieved from http://lib.calpoly.edu/support/how-to/find-articles/

Constantinou, C. S., Georgiou, M., & Perdikogianni, M. (2017). Medical students' attitudes and beliefs towards psychotherapy: A mixed research methods study. *Behavioral Sciences, 7*(3). doi:10.3390/bs7030055

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th Ed.). Thousand Oaks, CA: Sage.

da Costa, R. B., Hall, S. M., & Spear, A. (2016). Whose reality? A meta-analysis of qualitative research in international and comparative education. *Qualitative Report, 21*(4), 661-676. Retrieved from https://nsuworks.nova.edu/tqr/vol21/iss4/5

Deflem, M. (2015). Comparative historical analysis in criminology and criminal justices. In Copes, H. and Miller, J. M. (Eds.), *The Routledge handbook of qualitative criminology*, (pp. 63-73). London, England: Routledge.

Denzin, N., & Lincoln, Y. (Eds.) (2005). *Handbook of qualitative research* (3rd ed.). Thousand Oaks, CA: Sage.

Eliason, S. L. (2014). Life as a game warden: the good, the bad and the ugly. *International Journal of Police Science & Management, 16*(3), 196-204. doi:10.1350/ijps.2014.16.3.339

Farcas, A. M. (2017). Quantitative marketing research concerning the opinion, attitudes and behavior of the employed population of Mures County on the strategic management of the companies in which they developed activity. *Review of International Comparative Management / Revista De Management Comparat International, 18*(2), 217-230. Retrieved from https://ideas.repec.org/a/rom/rmcimn/v18y2017i2p217-228.html

Fox, J. F., Jr. (2017) *The birth of the FBI's technical laboratory—1924 to 1935.* Retrieved from FBI website: https://www.fbi.gov/history/history-publications-reports/the-birth-of-the-fbis-technical-laboratory1924-to-1935.

Gruenewald, J., Dooley, K. G., Suttmoeller, M. J., Chermak, S. M., & Freilich, J. D. (2016). A mixed-method analysis of fatal attacks on police by far-right extremists. *Police Quarterly, 19*(2), 216-245. doi:10.1177/1098611115623061

Klinger, D. A. (2008). *A multi-method study of special weapons and tactic teams.* Retrieved from National Criminal Justice Reference Service: https://www.ncjrs.gov/pdffiles18/nij/grants/223855.pdf

LaTourrette, T. (2015). Risk factors for injury in law enforcement officer vehicle crashes. *Policing: An International Journal, 38*(3), 478-504. doi:10.1108/PIJPSM-03-2015-0027

Lievrouw, A., Vanheule, S., Deveugele, M., De Vos, M., Pattyn, P., Belle, V., & Benoit, D. D. (2016). Coping with moral distress in oncology practice: Nurse and physician strategies. *Oncology Nursing Forum, 43*(4), 505-512. doi:10.1188/16.ONF.505-512

Lopez-Fernandez, O., & Molina-Azorin, J. (2014). The use of mixed methods research in interdisciplinary educational journals. *International Journal of Multiple Research Approaches, 5*(2), 269-283. doi: 10.5172/mra.2011.5.2.269

.

Los Angeles Police Foundation (2017). *History of S.W.A.T.* Retrieved from http://www.lapdonline.org/ metropolitan_division/content_basic_view/849

MacDonald, J. J., Fagan, J., & Geller, A. (2018). *The effects of local police surges on crime and arrest in New York City.* Retrieved from PLOS One: http://journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0157223

Marx, G. T. (2006). *Seeing hazily (but not darkly) through the lens: Some recent empirical studies of surveillance technology.* Retrieved from Wiley Online Library: https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1747-4469.2005.tb01016.x

Merola, V., & Hitt, M. P. (2016). Numeracy and the persuasive effect of policy information and party cues. *Public Opinion Quarterly, 80*(2), 554-562. doi:10.1093/poq/nfv051

Mertler, C. A. (2016). *Introduction to educational research.* Thousand Oaks, CA: Sage.

Murdie, A., & Peksen, D. (2015). Women and contentious politics: A global event-data approach to understanding women's protest. *Political Research Quarterly*, *68*(1), 180-192. doi:10.1177/1065912914563547

Peel, R. (1829). *Sir Robert Peel's principles of law enforcement 1829*. Retrieved from Durham Constabulary: https://www.durham.police.uk/About-Us/Documents/Peels_Principles_Of_Law_Enforcement.pdf

Police Executive Research Forum (2014). *Future trends in policing*. Retrieved from http://www.policeforum.org/assets/docs/Free_Online_Documents/Leadership/future%20trends%20in%20policing%202014.pdf

Police Foundation (2016). *The early years.* Retrieved from https://www.policefoundation.org/about/history/the-early-years/

Polit, D. F., & Beck, C. T. (2012). *Nursing research: Generating and assessing evidence for nursing practice* (9th ed.). Philadelphia, PA: Wolters Kluwer.

ResearchGate (2018a). *Police Practice and Research: Journal description*. Retrieved from https://www.researchgate.net/journal/1561-4263_Police_Practice_and_Research

ResearchGate (2018b). *International Journal of Police Science & Management*: Journal description. Retrieved from https://www.researchgate.net/journal/1478-1603_International_Journal_of_Police_Science_and_Management

Rodriguez, N. (2016, April). *Strengthening justice in the U.S.: The impact of scientific research* (Walter C. Reckless-Simon Dinitz Memorial Lecture.) *The Ohio State Journal of Criminal Law (14)*1, 289-301. Retrieved from http://moritzlaw.osu.edu/students/groups/osjcl/files/2016/12/12-Rodriguez.pdf

Sage Journals (2018). *Police Quarterly: About this journal.* Retrieved from http://journals.sagepub.com/home/pqx

Saint John's (2018). *Journal acceptance rates*. Retrieved from https://www.stjohns.edu/libraries/resources/journal-acceptance-rates

Santos, R. B., & Taylor, B. (2014). The integration of crime analysis into police patrol work Results from a national survey of law enforcement agencies. *Policing: An International Journal, 37*(3), 501-520. doi:10.1108/PIJPSM-08-2012-0075

Shahzad, K., Sillanpaa, I., Sillanpaa, E., & Imeris, S. (2016). Benchmarking supplier development: An empirical study of validating a framework to improve buyer-supplier relationship. *Management & Production Engineering Review, 7*(1), 56-70. doi:10.1515/mper-2016-0007

Springer Link (2018). *The Official Journal of the Society for Police and Criminal Psychology (journal description)*. Retrieved from https://www.springer.com/psychology/journal/11896

Spivak, H. (2018, February 27). Research-practitioner partnerships. *National Institute of Justice*. Retrieved from https://www.nij.gov/about/director/Pages/spivak-research-partnerships.aspx

Taylor & Francis Online (2018). *Policing and Society: An International Journal of Research and Policy (journal description)*. Retrieved from https://www.tandfonline.com/toc/gpas20/current

University of Illinois at Chicago, University Library (2016). *Measuring your impact: Impact factor, citation analysis, and other metrics: Journal impact factor*. Retrieved from https://researchguides.uic.edu/if/impact

University of Southern California, University Library (2018). *Organizing your social sciences research paper: Quantitative methods.* Retrieved from https://libguides.usc.edu/writingguide

United States Department of Justice, Office of Justice Programs (2012). *The role of fusion centers in countering violent extremism: Overview*. Retrieved from https://it.ojp.gov/documents/roleoffusioncentersincounteringviolentextremism_compliant.pdf

United States Department of Justice, Office of Justice Programs (n.d.). *Research, statistics, and evaluation*. Retrieved from https://ojp.gov/programs/research_stats.htm

Wisneski, J. E., Ozogul, G., & Bichelmeyer, B. A. (2017). Investigating the impact of learning environments on undergraduate students' academic performance in a prerequisite and post-requisite course sequence. *The Internet and Higher Education, 32*, 1-10. Retrieved from https://www.sciencedirect.com/science/article/pii/S1096751616300537?via%3Dihub

APPENDIX A: APPROVAL LETTER

MARSHALL UNIVERSITY
www.marshall.edu

Office of Research Integrity

November 21, 2018

David Lemmon
P.O. Box 826
Chapmanville, WV 25508

Dear Mr. Lemmon:

This letter is in response to the submitted thesis abstract entitled *"An Analysis of the Research Methods used in Select Peer-Reviewed Law Enforcement Journals, 2010 to 2015."* After assessing the abstract, it has been deemed not to be human subject research and therefore exempt from oversight of the Marshall University Institutional Review Board (IRB). The Code of Federal Regulations (45CFR46) has set forth the criteria utilized in making this determination. Since the information in this study does not involve human subjects as defined in the above referenced instruction, it is not considered human subject research. If there are any changes to the abstract you provided then you would need to resubmit that information to the Office of Research Integrity for review and a determination.

I appreciate your willingness to submit the abstract for determination. Please feel free to contact the Office of Research Integrity if you have any questions regarding future protocols that may require IRB review.

Sincerely,

Bruce F. Day, ThD, CIP
Director

APPENDIX B: ANNOTATED BIBLIOGRAPHY

Police Practice and Research: An International Journal

Police Practice and Research publishes articles and reports from practitioners, researchers and others interested in developments in policing, analysis of both public order and safety as it affects the quality of life. The journal presents current practices innovative police research, in addition to operational and administrative practices from around the world. The journal is peer reviewed and published bimonthly both online and print. The publisher of the journal is Taylor and Francis of London, UK. The journal impact according to ResearchGate is 0.37 (ResearchGate, 2018a).

International Journal of Police Science & Management

International Journal of Police Science & Management is peer reviewed through a rigorous double-blind reviewing policy. This journal is published with the goal of facilitating the exchange between academic research and criminal justice organizations, regarding good practice and practice evaluation. The journal is published by SAGE, an international publishing company. The journal is published quarterly, both in print and online; the journal impact according to ResearchGate is 0.50 (ResearchGate, 2018b).

The Official Journal of the Society for Police and Criminal Psychology

The Official Journal of the Society for Police and Criminal Psychology consists of peer reviewed reports and researched findings regarding criminal behavior, psychological principles pertaining to criminal justice and particularly law enforcement. The journal is published quarterly both online and print, by Springer International Publishing. The journal impact according to Springer Link, is 0.59 (Springer Link, 2018).

Police Quarterly

Police Quarterly publishes both qualitative and quantitative studies concerning police-oriented research for audiences such as practitioners and academics. The journal is published quarterly in both print and online by Sage Periodicals of Thousand Oaks, CA. The journal's impact factor according to its publisher's report is 1.457 (Sage Journals, 2018).

Policing and Society

Policing and Society articles are peer reviewed by editorial screening and an anonymous peer review process. The journal is widely known as the leading academic journal specializing in the study of policing institutions and their practices. Published 8 times annually by International Publishers Taylor and Francis, the journal's impact factor is 1.61 (Taylor & Francis, 2018).

APPENDIX C: DATA CODE BOOK

Research Method

Quantitative: 1

Qualitative: 2

Mixed Method: 3

Authors' Sex

Author: 1

Male: 1

Female: 2

Author: 2

Male: 1

Female: 2

Author: 3

Male: 1

Female: 2

Author: 4

Male: 1

Female: 2

Author: 5

Male: 1

Female: 2

Author: 6

Male: 1

Female: 2

Author Role/ Function

Author: 1

Academic: 1

Non-Academic: 2

Author: 2

Academic: 1

Non-Academic: 2

Author: 3

Academic: 1

Non-Academic: 2

Author: 4

Academic: 1

Non-Academic: 2

Author: 5

Academic: 1

Non-Academic: 2

Author: 6

Academic: 1

Non-Academic: 2

Journal Name

Police Quarterly: 1

Policing and Society: 2

International Journal of Police & Management: 3

Police Practice and Research: 4

Journal of Police and Criminal Psychology: 5

Journal Publication Year

2010: 1

2011: 2

2012: 3

2013: 4

2014: 5