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Public Perceptions About Police With Beards

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This is to certify that the doctoral dissertation by

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Walden University
2024

Abstract

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MA, Walden University, 2021

MA, National University, 2014

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Across the country, law enforcement administrators have sought solutions to strengthen police–citizen relationships and to increase morale in their departments. Some administrators have allowed officers to wear a beard while in uniform. Informal interviews across multiple police agencies in northern California revealed the decision to allow beards in uniform was not based on data, as no such data were available. This study was conducted using social judgment theory to answer a single foundational question: Does a beard on a uniformed officer impact the public's perception of that officer? The goal of the study was to measure participants' perceptions of the appearance of officers with and without beards, of the likely behaviors of the officers, and respondents' feelings about the officers. This research explored the views of respondents regarding their perceptions of a uniformed officer based solely on the presence or absence of a beard. In this quantitative study, an online survey was conducted among the population of one northern California county. The survey obtained 424 responses to capture a 95% confidence level. Multiple analytical tests were conducted to examine the relationships between the dependent and independent variables. The results indicate bearded officers rate more favorably than clean-shaven officers across 23 of the 24 measures of appearance, behaviors, and feelings. Age, prior arrests, and race demonstrated statistically significant relationships that allow for inferential prediction of the public's attitudes concerning bearded officers. These findings help positive social change by understanding the relationships between police and the people they serve and assists law enforcement administrators and officers in making data-driven decisions.

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Dedication

This dissertation is dedicated to my brothers and sisters in law enforcement. To those in or out of uniform who dedicate their lives to this oftentimes-thankless profession, thank you. May this study and its findings serve to help you better understand the impact your appearance has on public perception. Thank you for what you do and as always, stay safe.

Acknowledgments

First, I would like to thank my wife, Heather. Her encouragement and support throughout this journey gave me the fuel needed to start and to finish. Thank you love.

I also acknowledge the significant leadership of my committee chair Dr. Ali Banister and my second committee member Dr. Tony Smith who made the most challenging chapter (Chapter 4) actually fun! Thank you both for pulling me and pushing me along the way and for the speed with which you reviewed and returned my drafts.

Last, I would be remiss if I failed to mention the male models used in the creation of the survey instrument—Jon, Taylor, and Zach. Not many bearded individuals are willing to completely shave for the sake of a picture, let alone a survey instrument. I have received many compliments about the photos and the extreme different appearance each present. I sincerely appreciate your willingness to participate.

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Chapter 1: Introduction to the Study

Introduction

Police in the United States have historically enjoyed good relationships and public support from the citizens they serve (Moule, 2020). After a slight decline in 2014, the overall confidence and trust of the police returned to its 25-year average in 2017 (Norman, 2017). However, in recent years, growing dissatisfaction with police has been observed across the United States (Sargeant et al., 2018), with some communities going so far as to support calls to defund local law enforcement agencies (Craig & Reid, 2022). At the same time, instances of the use of force by police have risen, including the use of deadly force (Statista, 2021). According to the data, the use of deadly force by police has steadily climbed from 987 occasions in 2017 to 996 in 2018, to 1,004 in 2019, and 1,021 occasions in 2020 (Statista, 2021).

The other side of the equation, citizens using force against the police, also suggests an overall deterioration of the police–citizen relationship. Attacks on police officers, including ambush-style tactics with deadly outcomes as well as felonious assaults on officers committed during their duties, are documented annually by the Federal Bureau of Investigation (FBI) and presented in the Law Enforcement Officers Killed and Assaulted (LEOKA) database. According to the LEOKA database, 46 officers were killed, and 60,211 were assaulted in 2017 (FBI, 2017); 55 officers were killed with 58,866 assaulted in 2018 (FBI, 2018); and 48 officers were killed with 56,034 assaulted in 2019 (FBI, 2019). Violence committed by the police and violence committed against the police has become a national concern, and some hold it to be a symptom of

progressively worse relationships between the police and the public (Jackson et al., 2021).

The deterioration of this relationship has resulted in growing mistrust and contempt between law enforcement and the public and appears to have spread exponentially across the country in recent years (Thomas, 2020). Contentious interactions between the police and the public have fueled this fractured relationship and often result in further violence. This problem is evident in the increasing number of assaults and use of force by and against uniformed officers (Taylor, 2020). Some theorize that issues such as racism, lack of training, unwarranted use of force, and unequal treatment of citizens by the police are the root cause of this problem (Carmichael et al., 2021). However, others, such as Bates et al. (2015), have suggested that consideration must be given to the public perception of the police. The public perception of the police plays an integral role in how citizens behave before, during, and after contact with the police and in developing the public's feelings about the police (Bates et al., 2015).

Understanding the public's perceptions of police and what characteristics and attributes of an officer help to alter that perception for better or worse is a critical step toward restoring the police–public relationship. A modest amount of research regarding the public perception of police exists. However, there is little research on the relationship between the appearance of an officer and how that appearance influences public perception. In this study, I focused exclusively on the physical attribute of a beard on an officer and the impact the beard has on the public perception of that officer. The results of this study add to the body of knowledge in this area, fill a gap in existing literature,

and provide much-needed data for law enforcement administrators and officers to understand the dynamics of public perception about officers. When used appropriately, the data and analysis provided by this study may foster a cultural shift among law enforcement that aids in relational restoration.

In this chapter, I discuss the topic of the study, why the study needed to be conducted, and the potential positive social change implications of the study. Major sections of this chapter include the background of the study, the problem statement, the purpose of the study, the research questions, the theoretical framework, the nature of the study, definitions, assumptions, scope and delimitations, limitations, and the significance of the study.

Background

For a long time, society has used physical appearance and facial hair characteristics to judge individuals' social status and dominance over others. Although the specific origins of these judgments are unknown, children as young as 12 have been found to begin to recognize dominant traits and masculinity among men wearing facial hair (Nelson et al., 2019). In an exhaustive search of the literature, I identified selected works related to the scope of this study. Further expanded upon in Chapter 2, these works are presented in categories related to perceptions, facial hair, facial hair impacts on various professions, and public perception about police. *Facial hair, beards, police, perceptions, attitudes, violence,* and *crime* were among the keywords searched in the Criminal Justice Database, SAGE Journals, and Thoreau database at the Walden University Library. Despite the vast amount of literature and the number of studies

conducted on beards and their impact, little is known about their role when worn by a uniformed officer while contacting the public.

Any study that attempts to understand the impact beards have on the general population would include terms such as *facial hair, beards, attitudes,* and *perceptions*. Hellmer et al. (2018) studied the effects of variables on individuals' hostile attitudes, including facial hair. Mason and Mason (2017) examined how physicians' appearance, including beards, impacted the satisfaction level of their patients. Other researchers, such as Mittal and Silvera (2020), explored how customers perceive beards among sales and service professionals.

To steer this study toward the public perception of uniformed officers, terms such as *police, perceptions, attitudes, violence,* and *crime* revealed several relevant studies. However, no study has been conducted to examine the public perception of uniformed officers with a beard. Elliot et al. (2011) provided information on the interactions between police and perpetrators of a violent event, and Gleeson (2018) examined the reasons for negative or positive attitudes of young people toward the police. Powell et al. (2008) focused on children's perceptions of police, which helps to validate social judgment theory as a viable foundation for the bearded officer study, explained in greater detail later.

Paesen et al. (2019) provided information regarding the law enforcement profession's culture compared to non-law enforcement organizations, which helps to explain the similarities and differences in results of facial hair studies outside the law enforcement profession. For instance, a beard worn by a physician is associated with a

greater satisfaction level among patients (Mason & Mason, 2017), and beards worn by workers in sales and service professions have been associated with a higher level of customer satisfaction than clean-shaven workers (Mittal & Silvera, 2020). Therefore, according to the theory posed by Paesen et al. (2019), it seems likely that citizens would likewise have a positive perception of bearded police. Merging the bearded officer study with these findings indicates a possible tool that law enforcement administrators can employ to ease tensions and reduce risks to officers and the public. This study was needed to provide statistical data to law enforcement administrators and officers. The findings can aid in decisions by administrators regarding officers wearing beards. The findings also can facilitate understanding of the role that beards play in the public's perception of police.

Problem Statement

There is a lack of research and data regarding any relationship between beards worn by uniformed officers and public perception of those officers. For years, law enforcement administrators have tested various solutions to restore the police–citizen relationship and ultimately increase peace between law enforcement officers and the public. For instance, the increased violence perpetrated by and on these officers has led some administrators to reduce officers' presence and increase the level of crime that warrants a law enforcement response as a solution (Streeter, 2020). Other administrators took an opposite approach and increased the police's presence, including the use of National Guard soldiers as a force multiplier to serve in a law enforcement capacity as a solution (Vergun, 2020). Neither approach resulted in significant change, and the

profession's leaders continue to search for solutions to mitigate the problem and strengthen law enforcement relations with the public.

For unrelated reasons, and most often as a mechanism used to increase morale among officers, several departments have allowed their officers to grow and maintain beards while in uniform. In recent years in northern California for example, the Solano County Sheriff's Office, the Redding Police Department, and the Suisun City Police Department amended their dress and appearance policies to allow wearing a beard while in uniform. Inquiries to administrators of these departments revealed they made this decision without any data on the public perception of beards worn by officers. An exhaustive search of literature related to this phenomenon yielded few findings that indicate any significant relationship between officers who wear beards and the public's perception of those officers.

Purpose of the Study

The purpose of this exploratory quantitative study was to examine any relationship between a beard worn by a uniformed law enforcement officer and public perception of that officer. I sought to answer a single foundational question: Does a beard on a uniformed officer impact the public's perception about that officer? To do so, three areas of examination relative to perception were developed, each through population of data into their appropriate and corresponding scale. First, I examined any effect beards (worn by police) have on public perception about the appearance of the officer. For this determination, I addressed appearance in terms of *compassionate*, *professional*, *reasonable*, and *understanding* and gathered data regarding such to populate the

appearance scale, which is further described in Chapters 3 and 4. Next, I examined the relationship between beards (worn by police) and public perception about the likely behaviors of an officer. For this determination, I addressed likely behaviors of an officer in terms of *abuse authority*, *be corrupt*, *lie in court*, and *use excessive force*. I gathered data regarding these behaviors into the behaviors scale also further discussed later. Finally, I examined the relationship between beards (worn by police) and the public's individual feelings about the officer. For this determination, I addressed individual feelings in terms of *anxiety*, *compliance*, *hostility*, and *trusting*. These data were compiled for analysis into the feelings scale.

The data collection involved a survey instrument (see Appendix A) in which voluntary participants subjectively viewed photos of uniformed officers with and without a beard and then answered questions regarding the officer's appearance. The survey's questions aligned with the appearance of the officer, the likely behaviors of the officer, and the individual feelings of the respondent—all addressed in the terms outlined above. The key independent variables for this study were age, degree, ethnicity, gender, income, race, arrest, help, ticket, victim, law enforcement, like beards, and wear beards. The key dependent variables for this study were compassionate clean, compassionate bearded, professional clean, professional bearded, reasonable clean, reasonable bearded, understanding clean, understanding bearded, abuse clean, abuse bearded, force clean, force bearded, honest clean, honest bearded, truth clean, truth bearded, calm clean, calm bearded, compliant clean, compliant bearded, peaceful clean, peaceful bearded, trusting clean, and trusting bearded. The goal of the study was to present any statistically

verifiable relationships or differences between the variables related to clean-shaven officers and the variables related to bearded officers with the corresponding perceptions of the public. The project directed the study's focus toward the impact of a beard on the relationship between law enforcement and the public in a specific county in northern California. The study was unique because, as mentioned earlier, I explored an under researched area of police–public relationships.

The intent of the study was to explore any statistically significant differences regarding perceptions about a bearded officer and a clean-shaven officer and to review any correlation between the independent and dependent variables described more fully in Chapter 3. I examined the strength and direction of any relationships and the differences between public perception about the differing appearance of the officers.

Research Questions

In this experimental quantitative study, I examined the differences between public perceptions of clean-shaven officers and public perceptions of bearded officers. I explored the strength of relationships between varying perceptions and the identified independent variables. Over 16,000 pieces of data were collected from a county in northern California, from respondents connected to the area. These data were used to answer the questions. This study was guided by the question identified above and the following three underlying research questions (RQs) and their hypotheses (Hs):

RQ1: Is there a relationship between a beard on a uniformed officer and one's perception about the appearance of the officer?

$H_0$1: There is no significant relationship between a beard on a uniformed officer and one's perception about the appearance of the officer.

H_a1: There is a significant relationship between a beard on a uniformed officer and one's perception about the appearance of the officer.

RQ2: Is there a relationship between a beard on a uniformed officer and one's perception about likely behaviors of the officer?

$H_0$2: There is no significant relationship between a beard on a uniformed officer and one's perception about likely behaviors of the officer.

H_a2: There is a significant relationship between a beard on a uniformed officer and one's perception about likely behaviors of the officer.

RQ3: Is there a relationship between a beard on a uniformed officer and one's individual feelings about the officer?

$H_0$3: There is no significant relationship between a beard on a uniformed officer and one's individual feelings about the officer.

H_a3: There is a significant relationship between a beard on a uniformed officer and one's individual feelings about the officer.

Theoretical Framework

Exploration of the impact beards have on public perception of police requires a theoretical framework to guide understanding of the phenomenon (Given, 2008). I utilized social judgment theory as a framework to ground the study and to understand human behavior better as it relates to perceptions of others. Initially developed by Muzafer Sherif, with substantial assistance from Carl Hovland and Carolyn Sherif, the

theory is intended to explain the communication process (Hammond, 1955). The theory has since evolved into seeking to explain how individuals form judgments of others, how they form perceptions, and how those perceptions influence actions. Social judgment theory is the leading theory used throughout this study. The theory is relevant in understanding public perception of police and what factors perceived by the public, including the presence of a beard, may impact, influence, or alter those perceptions.

This project included gathering quantitative data from respondents who participated in a survey that was taken online and is located at Appendix A. Voluntary participation was solicited from the general population in a county in northern California, through social media platforms of a local law enforcement agency and a local news outlet. The survey instrument depicted photographs of officers with and without a beard and required respondents to answer questions regarding the images. The responses were analyzed to determine the strength, association, and direction of the relationship between the presence of a beard on an officer and corresponding perceptions of the public about the officer. In this cross-sectional study, I examined, assessed, and evaluated public perceptions and professional judgments toward officers based on a single physical appearance attribute: the presence or absence of a beard.

Social judgment theory has become a leading theory used to study factors people use to form judgments (Granberg, 1982). The theory holds that humans judge others based on their beliefs and attitudes (Brunswick, 1952). The survey instrument designed for this study teased out the beliefs and attitudes of respondents when respondents viewed

officers with or without a beard. In Chapter 2, I discuss this theoretical framework in further detail.

Nature of the Study

A quantitative research design was best suited to answer the given research questions about the relationship between beards worn by uniformed officers and public perception of those officers. Informal interviews with law enforcement officers conducted in 2020 and 2021 indicated the presence of officers with beards may have significantly altered the outcome of interactions between police and citizens. This quantitative study was conducted to highlight the existence and strength of the relationships between beards worn by police and public perception of those officers. The best way to examine relationships between variables and test the strength of those relationships is through a quantitative design. Descriptive quantitative research designs establish associations between variables (Labaree, 2009). Utilizing a deductive approach in this study accomplished the goal of determining a correlation between the variables.

The primary purpose of this study was to explore the differences between perceptions of clean-shaven officers and perceptions of officers with a beard. The data collected included independent and subjective ratings of both clean-shaven and bearded uniformed officers' appearances and corresponding perceptions in terms of compassion, professionalism, reasonableness, and understanding. These ratings formed the first group of dependent variables and categorized by clean-shaven input (COM1, PRO1, REA1, UND1) and by bearded input (COM2, PRO2, REA2, UND2) into the appearance scales (APP1 and APP2) further explained below. Data collected involved ratings of both clean-

shaven and bearded officers perceived likely behaviors in terms of abuse authority abuse, use excessive force, be honest, and tell the truth. These ratings formed the second group of dependent variables and were categorized by clean-shaven input (ABU1, FOR1, HON1, TRU1) and by bearded input (ABU2, FOR2, HON2, TRU2) into the behavior scales (BEH1 and BEH2). Last, I collected ratings of respondents' feelings invoked when presented with a clean-shaven and bearded officer in terms of calm, compliant, peaceful, and trusting. These ratings formed the final group of dependent variables categorized by clean-shaven input (CLM1, CPL1, PCF1, and TRS1) and by bearded input (CLM2, CPL2, PCF2, and TRS2) into the feelings scales (FEL1 and FEL2).

These data were collected from 424 respondents from a county in northern California, who participated in a voluntary online survey. Data were analyzed through various univariate, bivariate, and multivariate examinations. This combination of analysis provided information needed by law enforcement officers and administrators to make informed, data-driven decisions about officers wearing beards in uniform.

Definitions

I used the survey instrument at Appendix A to collect data and give value to the independent and dependent variables. As more fully described in Chapter 3, the dependent variables were grouped into three scales aligned to specific research questions. The first group of dependent variables comprised the appearance scale and aligned with RQ1. This consisted of clean-shaven and bearded officers rated in terms of appearing compassionate, professional, reasonable, and understanding. In addition, these variables were combined to create a composite variable of appearance of the clean-shaven officer

(APP1) and appearance of the bearded officer (APP2). The second group of dependent variables comprised the behaviors scale and aligned with RQ2. This consisted of clean-shaven and bearded officers rated in terms of their likelihood of demonstrating a particular behavior such as abuse authority, use excessive force, be honest, and tell the truth. These variables were also combined to create a composite variable of likely behaviors of a clean-shaven officer (BEH1) and likely behaviors of a bearded officer (BEH2). The third group of dependent variables comprised the feelings scale and aligned with RQ3. This consisted of clean-shaven and bearded officers rated in terms of respondents feeling calm, compliant, peaceful, and trusting. In addition, these variables were combined to create a composite variable of respondent feelings regarding the clean-shaven officer (FEL1) and respondent feelings regarding the bearded officer (FEL2). Variables comprised of officers who were clean-shaven ended with 1, as observed in the above variables (APP1, BEH1, and FEL1), and variables comprised of officers who wore beards ended with 2, as observed above (APP2, BEH2, and FEL2).

Independent sociodemographic variables were collected that consisted of age, degree, ethnicity, gender, income, and race. In addition, other independent variables were collected that consisted of pertinent historical background events of the respondent such as prior arrests, calling police for help, receiving a traffic ticket, and previous crime victim. More independent variables were gathered that captured potential bias toward law enforcement or toward beards, such as determining if the respondent or an immediate family member of the respondent was a member of law enforcement, if the respondent liked beards, and if the respondent wore a beard.

To avoid any misinterpretations and add clarity to this study's understanding, the following are key terms that may have subjective meanings. This document incorporates the following basic definitions.

Beard: Facial hair that grows on the jaw, lower lip, and chin, often including the upper lip or a mustache.

Facial hair: Any amount of hair growth in the facial area, including stubble, a mustache, a beard, or a goatee.

Mustache: Facial hair grown on the upper lip that may extend past the corners of the mouth.

Officer: Any sworn local, state, or federal law enforcement officer who is duly appointed, maintains the legislative authority to detain and arrest individuals, and wears a uniform daily while exercising their assigned duties. This study excludes officers whose regular attire is plain clothes, such as a detective squad or narcotics unit.

Public perception: The views, opinions, thoughts, feelings, and other generalized thoughts of the public concerning this topic.

Assumptions

The primary assumption in this study was related to the respondents who participated. Because the survey instrument was administered online without a mediator, I assumed respondents would understand the questions entirely and provide a truthful answer. Clear terms were used in the questions, and descriptive instructions were included to mitigate any misunderstanding. To further mitigate any potential misunderstandings or questions that could have developed by the respondents, my contact

information was presented in the consent form. Respondents were also requested to take the survey only one time. No contact with me was attempted by any participants, and I assumed there were no misunderstandings or questions. The study was administered online without the presence of a mediator; therefore, this assumption was necessary within the context of the study to ensure the validity of the answers.

A secondary assumption of this study was that respondents would complete the survey without skipping any questions or leaving any questions blank. The survey consisted of 24 short questions that involved respondents viewing a photo and answering a question. The survey then concluded with 13 additional questions that solicited sociodemographic information, established a respondent's pertinent historical background, and sought to identify any potential bias a respondent may have toward or against law enforcement or beards. The survey was projected to take approximately 3–5 minutes to complete. This brevity helped to ensure that those who began the survey completed it.

Scope and Delimitations

One specific aspect of the research problem is that law enforcement officers and administrators have no data to use when making decisions regarding allowing and wearing a beard while in uniform. The focus of the study was to provide data and analysis to aid in this decision making. This study's scope and boundaries included individuals in a county in northern California who chose to complete the survey. The survey instrument was advertised through a local area law enforcement agency and a local area news outlet, both within the county.

The delimitation of this study was the examined population base in and around a county in northern California. The study was not suited nor advertised with an intent to capture the perspectives or opinions of all U.S. citizens. While the study could be administered to any online population group, the northern California county was used exclusively for this study. The results of this research may be extended from the research population to other population groups across the United States. The dependability of this extension is statistically probable although not absolute.

Limitations

A limitation of this design was that the distribution method rarely captures the entire target population. Using social media or any other internet-based venue to distribute the survey instrument inherently prevents a percentage of the population with no access to the internet from participating. Furthermore, the reported population of the county in 2021 was approximately 180,000 people (city-data, n.d.). Social media alone only reached a small percentage of the county's population.

The primary ethical concern was that of informed consent. Informed consent is the cornerstone of ethical research on subject participants (Rudestam & Newton, 2015). The use of an online survey allows participants to point and click their way through the consent portion without genuinely having a grasp of what they are acknowledging. Research has indicated that approximately 80% of users do not even read the entirety of informed consent-related documents and instructions when undergoing surgical procedures (National Communications Association, 2014). In that situation, a survey administrator must be present to answer any questions and guide a participant through the

expectations of the procedure. To safeguards against this concern, an informed consent statement was presented on page one of the survey instrument (Appendix A). By design, the survey was created in such a manner that respondents were forced to acknowledge and agree to the consent before being allowed to continue to the survey.

The final noted limitation is that the quantitative data collected, no matter how interpreted, do not address the reasoning behind the phenomenon. By design, quantitative methodology does not capture the why regarding social data. Qualitative data analysis would have been better suited for this understanding, and a qualitative follow-up study may produce findings of that nature.

Any potential bias that could influence the study was held exclusively by the respondent to the survey. Participants may have had a background that formed a bias for or against law enforcement, and that predisposition may be evident regardless of an officer's appearance. In addition, participants may have had a bias against beards or facial hair in general. For example, a participant who had an abusive father who wore a beard might associate the potential for abusive behavior with all men with beards, skewing their responses when viewing a photograph of an officer with a beard. To mitigate these potential biases, the survey instrument included a series of questions designed to identify any historical characteristics of a respondent that may lend toward a bias. If noted, individual answers from that respondent were controlled for and analyzed using appropriate multivariate analysis.

Significance of the Study

The findings of this study add to the collective knowledge regarding police–public relationships by filling an existing void in research focused on the impact beards have on the public perception of police. Facial hair is a testosterone-dependent trait (Miranda et al., 2018), and studies have shown it is associated with authority and masculinity (Thornhill & Gangestad, 1993). Many law enforcement agencies have recently allowed uniformed officers to wear beards. Understanding the impact on public perception of officers with beards is worthy of exploration. The findings of this study provide data to law enforcement administrators for consideration in their decision to either allow beards or forbid them for their uniformed officers. This study provides needed insights into public attitude toward officers with beards and subsequent perceived reactions when contacted by such an officer.

This research also assists uniformed officers in their decision to wear a beard or not. This study explored if wearing a beard alters an officer's ability to resolve a situation peacefully, among other phenomena, by determining if a level of hostility toward the officer is related to the presence of a beard on the officer. By exploring any impact beards have on public perception of the police and subsequent publication of the findings of this study, officers may better understand the benefits or detriments of wearing a beard while in uniform. Some law enforcement special teams positions necessitate a clean-shaven face to ensure a proper seal on a gas mask. However, armed with the knowledge gained from this research, officers may be better educated and more apt to make data-driven decisions as to wear a beard or not.

Summary

The intent of this study was three-fold. First, the study helps fill a gap in the literature regarding the impact a beard has on public perception of an officer wearing the beard. Second, the study provides data regarding this impact to law enforcement administrators to assist in their decision to allow or forbid officers from wearing a beard while in uniform. Third, the study provides data to law enforcement officers on the impact beards may have on public perception of police to aid in their decision to wear a beard if allowed.

The data were gathered through an online survey (located in Appendix A) in which respondents viewed photos of officers and answered questions based on the photos. In the survey instrument, the same question was asked of both bearded and clean shaved officers. The instrument used a numerical scale to rate the images for analysis. Capturing data through a quantitative design allowed for the appropriate statistical tests to determine the strength of the relationship between beards and public perception.

In the next chapter, I review the problem statement and identify the strategy used to search relevant literature. I also explain the theoretical foundation used for this study and summarize the literature review. The literature review is divided into sections appropriate for this particular study.

Chapter 2: Literature Review

Introduction

The relationship between law enforcement officers and the public has deteriorated recently (Thomas, 2020). Law enforcement administrators have struggled to identify the root cause behind the deterioration and have looked at various possibilities, such as lack of training, unwarranted use of force, unequal treatment of citizens, and racism (Carmichael et al., 2021). Tensions between police and the public seem to be at a near-boiling point. Police killings, such as Michael Brown in Ferguson, Missouri, in 2014; Breonna Taylor in Louisville, Kentucky, in 2020; or George Floyd in Minneapolis, Minnesota, in 2020, sparked nationwide protests. Following the protests, the public and lawmakers often demand solutions, even if it means defunding police agencies.

Instances of the use of force by police have risen in recent years, including the use of deadly force (Statista.com, 2021). According to recent data, the use of deadly force by the police has steadily climbed from 987 occasions in 2017 to 996 in 2018, to 1,004 in 2019, and 1,021 occasions in 2020 (Statista.com, 2021). Attacks on police officers, including ambush-style tactics with deadly outcomes, as well as felonious assaults on officers committed during their duties, are documented annually by the FBI and presented in the LEOKA database. According to the database, 46 officers were killed, and 60,211 were assaulted in 2017 (FBI, 2017); 55 officers were killed, with 58,866 assaulted in 2018 (FBI, 2018); and 48 officers were killed, with 56,034 assaulted in 2019 (FBI, 2019). Be it attacks on the police or the use of force by police, law enforcement

administrators and civic leaders across the country are actively seeking to reduce these instances through various means with varying levels of success.

Any study that intends to provide meaningful data to law enforcement administrators regarding police–public relationships must, at some point, explore what it is about police that changes the public perception for better or worse. It is well-established that attitudes and perceptions strongly influence individual behavior (Dixson & Brooks, 2013; Kenny & Fletcher, 1973; Oldmeadow & Dixson, 2016;). Therefore, the public perception of police may influence the behavior of the public toward police (Bates et al., 2015). There have been numerous studies of varying factors that affect the public perception of police (Bates et al., 2015; Carmichael et al., 2021; Gleeson, 2018). Some of these researchers have indicated, among other things, that officers' appearance can alter public perception. Additionally, there have been studies on the impact beards have in non-law enforcement careers such as sales, customer service, and medical professions (Kenny & Fletcher, 1973; Mason & Mason, 2017; Mital & Silvera, 2020). However, no such data or research exists that suggests beards worn by officers may or may not impact public perception of police, which in turn may affect the instances mentioned above.

There needs to be more research and available data regarding the relationship between beards worn by police and public perception of those officers who wear beards. Police administrators must make data-driven decisions or decisions rooted in evidence. Several police departments in California have amended dress and appearance standards of uniformed officers to allow the presence of professionally manicured beards while in uniform. Police agencies in California, such as the Redding Police Department, the

Suisun City Police Department, and the Solano County Sheriff's Department, have made this policy adjustment and currently allow facial hair to include the presence of beards. During initial queries to the reasoning behind these policy adjustments, no department leadership referenced any data or studies to allow the change. Instead, leaders allowed the change on a part-time basis that later evolved into a full-time change because of the perceived increase in officer morale and the absence of complaints about officers' appearance. These professionals are in the habit of making data-driven decisions. However, in the case of beards, there is no data to draw on and no studies to consult that could give insight into the effect beards may have on public perception of police.

This study fills this void and contributes to the body of knowledge by examining the impact beards worn by police have on public perception of police. Quantitative analysis of data gathered from this study could indicate whether beards worn by officers may improve the relationship between police and the public or damage it further. In addition, the identified predictor variables allow for prediction, with a degree of certainty, of how an individual's perception of police may or may not change with the presence or absence of a beard. Although this study focused exclusively on public perception in one county in northern California, it can be adapted and modified for distribution nationwide.

The county used in this study is in northern California and has a population of approximately 180,000 residents (city-data, n.d.) There are four primary uniformed police agencies in the county and only one of them allows its uniformed officers to wear beards. During an informal interview in 2021 with the agency that allows beards, a department representative said the department temporarily allowed beards during a six-month trial.

During the trial, the department received no negative feedback from the community but lots of positive feedback. After the trial, leadership amended the facial hair policy to allow the wear of beards in uniform.

In this chapter, I present the research strategy and theoretical framework of the study. I then offer a review of the existing relevant literature categorized into three areas that form the foundation of this topic. The first area is focused on facial hair, including societal views and presumptions about those who wear mustaches and beards. The second area includes literature into factors that influence public perception of police. The third and final component includes literature regarding how beards have been found to impact non-law enforcement professions such as medical care, customer service, and sales.

Literature Search Strategy

In this exhaustive literature research, I used several sources of information. The Walden University Library and Google Scholar were the primary sources used to systematically search existing literature related to the three categories of the literature identified above. The online library databases included APA PsychArticles, Bureau of Justice Statistics, Criminal Justice Database, CultureGrams, ProQuest Central, ProQuest Criminal Justice, and Sage Journals. I used the following key search terms: *attitudes, opinions, beliefs, viewpoints, perspectives, perceptions, beards, facial hair, police, crime,* and *violence*. Further revision of the search results limited the findings to include only peer-reviewed scholarly journals. However, these terms returned an unmanageable volume of results, forcing several search parameters to include multiple terms such as

attitudes and *police* or *beards* and *perceptions*. When combined, the refined results were much more focused and beneficial. In addition, key phrases were used in the search to refine further and identify pertinent literature. Key phrases included *impact of facial hair*, *public perceptions toward police*, *public attitudes of facial hair*, and *impact of facial hair in the work environment*. Findings along these search terms revealed only a small amount of literature regarding beards and their impact on perception. No research specifically addressed the impact beards have on public perception of police.

An additional search strategy involved the review of references lists of relevant published dissertations in the criminal justice field that included aspects of public perception of police. The timeframe for all sources was limited to 2012–2022 to ensure the relative currency of the reviewed information. Some sources were not current or within the last 10 years but were essential to explaining the historical aspects of the chosen theory.

Theoretical Foundation

The primary purpose of this study was to determine if beards worn by uniformed officers impacts public perception of those officers. I sought to understand if beards cause the public to judge officers differently, to what extent, and by what measure. Public perception of officers may influence interactions between the public and officers. If, for example, the public perceives an officer to be compassionate, professional, and understanding, the interaction may be more positive and peaceful. If, on the other hand, the public perceives an officer to be judgmental, non-professional, and unfair, then the interaction may not be positive or peaceful.

In this study, I touched on the elements of human interaction and the variables that can alter the interaction toward a positive or negative outcome. Under the psychological umbrella, many theorists have attempted to explain human interaction, with perhaps the most noted being Sigmund Freud with psychoanalytic theory (Konvalina-Simas, 2016). Others, such as Cavanagh (2017), contend that at the core of every human interaction, one person either elevates or lowers their dominance or submission to the other. Therefore, because contemporary studies indicate facial hair is associated with a perception of dominance (Addison, 1989; Dixson &Vasey, 2012; Dixson et al., 2018; Nelson et al., 2019), perhaps facial hair influences dominance between two individuals. On a deeper level, however, my study was not focused on human interaction but on human judgment, as judgment precedes interaction.

In this study, I used social judgment theory as a framework to ground the research and to understand human behavior better as it relates to their judgment of others. The theory was relevant to understanding public perception of police and factors perceived by the public, including facial hair, that may impact, influence, or alter those perceptions. The theory was used to explore how the perceptions, in turn, influence subsequent interactions between the public and police. The core of this research is judgment and subsequent interactions based on judgment. Social judgment theory captures both.

Social Judgment Theory

Social judgment theory seeks to explain how individuals form perceptions and how those perceptions influence their actions (Encyclopedia.com, 2019). Understanding how individuals form judgments of others and how those judgments influence

interactions establishes a firm foundation to explore whether a beard worn by a uniformed officer impacts how the public judges the officer. In addition, I sought to understand how a beard may impact or influence following interactions between an officer and the public. This theory can explain why the presence of a bearded officer may influence an otherwise combative arrestee to surrender. Or, contrarily, explain why a bearded officer may face fierce resistance, as certain beards may evoke feelings of fear, terror, and danger (Culcasi & Gokmen, 2011).

According to Hammond (1955), the theory was initially developed by Muzafer Sherif, with substantial assistance from Carl Hovland and Carolyn Sherif, and was intended to explain the communication process. The theory was initially used in social psychology to explore the results of communication experiments conducted in a laboratory setting. The original goal of the theory was to understand and explain audience members' acceptance or rejection of persuasive messages. Sherif originally studied group attitudes and suggested that each member of an audience has an individually unique attitude that can be categorized into an attitude continuum (Hammond, 1955).

Along the continuum, Sherif found attitudes to migrate toward one of three distinct zones—acceptance, rejection, or neutral—and each member is, by default, anchored to one of these zones. This anchoring persuades the member regarding the message and often is a product of the member's past experiences (Hammond, 1955). This original framework of Sherif directly applies and can be easily adapted to a study of beards. For example, when interacting with an officer with a beard, the public's perception and attitudes can likewise be categorized into one of the three distinct zones.

If a public member has a general attitude of acceptance regarding the bearded officer, then the facial hair may positively impact the interaction. If, however, the member has an attitude of rejection regarding the beard, it leads to a more negative impact on the interaction.

With significant formative input from psychologist Egon Brunswik, social judgment theory evolved into a leading framework used to study human judgment (Granberg, 1982). Sherif used Brunswik's idea of probabilistic functionalism to lay the theoretical groundwork of social judgment theory (Wagner, 2019). Brunswik then improved on the theory and added that humans judge others based mainly on their beliefs and attitudes (Brunswik, 1952). Beliefs and attitudes develop and form over time and are based on the environment one is raised in and the society one lives in (Brunswik, 1952).

Social judgment theory holds that differences in judgments are primarily cognitive in origin and are based on the environment and cultural setting of the individual (Adelman et al., 1975). Evidence of this can be found when viewing social norms from one culture that would be considered abnormal in another culture. A modern-day example of this phenomenon is found in the Middle East, where local laws and ordinances often mandate women to cover their heads and faces in public settings (Sandikci, 2019). While typical in one cultural setting, this behavior would be considered abnormal in another, such as the United States.

The evolution of this theory is a product of minor alterations and changing focuses made over a few decades. From Sherif's original concept of understanding why an audience member may reject or accept a message to Brunswick's adaptation of human

judgment, social judgment theory is used across a broad spectrum of research that attempts to understand how humans make decisions (Balke et al., 1973; Hammond, 1955; Lee &Chun, 2016; Rossi et al., 2016; Sung & Lee, 2015). Sherif later refined the narrow definition of social judgment theory as how one perceives and evaluates an idea by comparing it to their default and current attitudes. Some adaptations and uses of social judgment theory in contemporary research are further explored below.

Beginning with Balke et al. (1973), these researchers applied social judgment theory to their study of labor-management negotiations. Their study centered around two distinct groups of individuals found during these negotiations, the union negotiators and the management team. In their research, Balke et al. (1973) suggest that the prime source of human conflict and disagreement begins through the exercise of human judgment. Their study had four primary objectives: (a) to explore the judgments of both parties, (b) to measure the level of conflict between the two parties, (c) to determine if the application of social judgment theory would result in successful negotiations, and (d) to determine if their approach could be used in actual union-management negotiations.

In their study, Balke et al. (1973) created a hypothetical union dispute wherein representatives from the union and the management team were pitted against each other to negotiate the dispute that centered on multiple demands from either party. Using social justice theory, two teams identified two key issues that the parties disagreed on and were non-negotiable to either. Applied to the Sherif model, these parties held firmly to an attitude of acceptance or rejection regarding these issues. Significant results of the study included the ability of the teams to agree to most of the issues spread across 25 contract

disputes. Conversely, the two teams that did not use the tenets of social judgment theory and were restricted to conventional verbal negotiations did not achieve similar results. Understanding and leveraging the degree of acceptance, neutrality, or rejection enabled the negotiation teams to achieve positive results.

Then, during more contemporary studies, in 2015, Dr. Moon Lee, a professor of Journalism at the University of Florida, partnered with Dr. Kang Sung to explore attitudinal changes of people based on exposure to others' attitudes (Sung & Lee, 2015). This study was based on social judgment theory and found that reading online comments and satisfaction levels regarding a company, both positive and negative comments, had an immediate and measurable impact on the reader's perception of that company. They also found that online comments could alter a predisposed perception of the company (Sung & Lee, 2015). A reader could begin with an attitude of acceptance of the company based on prior experiences. Then after reading online critiques, comments, and ratings of the company, their perception of the company could change without their personal experience of the company grounding their bias either way. They also found the opposite accurate, that a negative attitude could change to a positive one through exposure to others that demonstrated an attitude of acceptance. This finding asserts that some members of the public may hold an attitude of rejection toward bearded officers but may change their perceptions after exposure to others with an attitude of acceptance.

The following year, in a similar study, Dr. Lee partnered with Dr. Jung Chun to further his study. They tested the degree to which public opinion polls and online comments affect the public's attitude of acceptance or rejection with a measure of

willingness to voice their opinion on social media platforms. In the study, they conducted two experiments which led to the findings that certain public opinion polls and online comment forums do have a measurable interaction with an individual's prior beliefs about the discussed topic (Lee & Chun, 2016). Their finding directly applies to the bearded officer study because the intent is to share the study's results with the community in the county, including department heads of the local law enforcement agencies. According to Lee and Chun (2016), the comments and opinions collected during the bearded officer study, when viewed by the public, can impact individual attitudes toward bearded officers.

Also, in 2016, while researching the local community perceptions of tourists and visitors to national parks in Australia, Rossi et al. (2016) relied on social judgment theory to frame their research. In their work, these researchers surveyed the communities near six national parks in Queensland, Australia. The survey collected the resident's perceptions of various activities common to visitors and tourists of the parks. Aligning with Serif's attitude continuum, their results indicated that those surveyed with stronger territorial roots tended to oppose motorized activities in the parks more strongly. This opposition aligned with an attitude of rejection. While at the same time, these respondents tended to display an attitude of acceptance for the visitors and tourists that did not utilize motorized activities. According to Rossi et al. (2016), their findings could be applied to help determine and predict the local community's boundaries and acceptance levels regarding recreational activities in the area. These findings can also apply to the bearded officer study. For example, among the background questions in the

survey instrument, one line of questions solicits responses regarding the participant's history around beards. Suppose the respondent indicates a fearful history around beards, such as being raised by an abusive father that wore a beard. In that case, their history may negatively impact their view of an officer with a beard. This situation is addressed earlier in Chapter 1 when identifying potential bias.

Then in 2017, Dr. Leslie R. Salazar (2017)., a communications professor at West Texas A&M University, developed an in-class activity demonstrating to students the basic tenants of social judgment theory. In the activity, he presented the students with a basic understanding of the theory and the three primary anchor points of acceptance, neutrality, or rejection. They were then given current controversial topics and asked to align their initial beliefs along the attitude continuum of acceptance, neutrality, or rejection. After identifying their anchor, Dr. Salazar gave the students a short time to develop a persuasive argument counter to their core belief.

According to Salazar (2017), this activity helped students better understand the concepts of the theory in an applied and relevant manner. Further, Salazar opined that the activity demonstrated the applicability of social judgment theory in developing arguments from different points of view (Salazar, 2017). Within the context of a study on facial hair, the same categorization of acceptance, neutrality, or rejection can be identified as the default opinion of individual members of the public. The work of Salazar and the designed activity make for a strong advocacy of social judgment theory as a foundational theory.

Also, using social judgment theory in his research in 2019, Matthews explored the reasons and methods by which people continuously judge media personalities and their behaviors (Matthews, 2019). He asserted that foundational dispositions dictate moral judgment. The foundational dispositions used by Matthews can be likened to Sherif's original attitudinal spectrum of acceptance, rejection, or neutrality. In his study, Matthews utilized three experiments to test the utility of social judgment theory in observing dispositional biases and the boundaries created and enforced by the societal setting.

Matthews (2019) opined that for people to evaluate media personalities as having good or bad morals, they must leverage their belief system against the observed actions of the personalities. Further, he suggested that when people judge these personalities as being moral, their acceptance of that personality increases. On the other hand, when judged as immoral, their rejection of that personality increases. Matthews' research sought to observe variances in people's moral judgments hoping to reveal the boundaries of their dispositional biases. Said another way, he sought to explore the points on the attitudinal continuum in which the attitude shifted from acceptance to neutral or rejection, or any combination thereof. His study is easily adaptable to the bearded officer study in that the Matthews study used observations of media personalities and their behaviors to form opinions or judgments about them. Similarly, the bearded officer study uses images of officers with and without a beard performing a function (such as writing a ticket or writing in a notebook) to explore any change in the public perception of the officer. Like

Matthews, the bearded officer study identified at what point there was an attitudinal change of perception.

The studies identified above all utilized social judgment theory to understand how perceptions form and what outside influences can alter those perceptions. Any impact that outside influences have that serve to alter the individual's position on the attitude continuum would seem to reinforce Sherif's original belief and Brunswik's assertion that attitudes form from the environment in which one is raised, and in which one is currently surrounded.

Members of any community have varying beliefs that may differ from the popular opinion of that community. When applied to the profession of law enforcement, communities have individuals and groups that support law enforcement as well as individuals and groups that do not support law enforcement. The United States saw this played out on multiple news and media sources in recent years as anti-police protests clashed with pro-police supporters across the country. Any study, such as the bearded officer study, that attempts to identify a single feature of an officer that can change the perception of the officer must fully understand how perceptions form and how those perceptions lead to judgments.

Literature Review

The above search strategies aligned relevant literature into three primary areas. Further examined below, the areas are categorized and grouped into studies of (a) facial hair, (b) the impact facial hair has on non-police professions, and (c) varying factors (other than facial hair) that influence the public's perception of the police. These

categories combined comprise most of the relevant literature used to study further the impact beards have on public perception of the police. As stated earlier, there is abundant literature regarding beards, their effects on professions, and what impacts the public perception of the police. However, no qualified studies of the impact beards have on the public perception of the police were located. This study, and the findings explained later, fill that noticeable void.

A common denominator among all three categories can be loosely summarized as *perceptions*. Understanding perceptions and how human beings form opinions, judgments, and beliefs are fundamental to understanding how facial hair impacts public perception of an officer. Critically essential questions such as "How do we judge," "Why do we have this opinion," "How long does it take to form an impression," and "What is it about this person that makes me feel this way," are at the center of the initial literature review. It is how this section begins to frame the cornerstones of the three categories of study below.

Perceptions

Beliefs, opinions, attitudes, judgments, and impressions are common synonyms of perceptions. One must examine psychological, sociological, and biological factors to understand how the human being forms a perception of another. This first section of the literature review explores thoughts on these matters and attempts to draw inferences from each factor relevant to the bearded officer study. Psychological, what about our mental make-up fuels or sways perceptions? Sociological, does society or societal views influence our perception? And biological, what happens at the chemical and neurological

level of our brains that interacts with our perception? This section attempts to understand these questions and more as we examine this topic.

A direct encounter with the world we live in, an encounter observed through our senses, essentially forms our perceptions (Forman, 2022). While studying ancient Buddhist literature, Forman (2022) compared the ancient writings and understandings to contemporary cognitive science to determine similarities. The Buddhist belief holds that perceptions are subconscious and formed by previous patterns of thought (Forman, 2022). This finding aligns with Brunswik's (1952) assertion that perceptions form from the environment in which one is raised, and historical thoughts heavily influence them.

When coupled with the research of Freeman and Johnson (2016), there seems to be evidence of higher-order social cognitive functions that engage when forming opinions. In their study, Freeman and Johnson (2016) identify the fusiform gyrus, orbitofrontal cortex, and anterior temporal lobe as primarily responsible for forming social perceptions of others. They find that a single glimpse of an individual allows one to spontaneously determine social categories such as gender, race, and age, among others (Freeman & Johnson, 2016). Brunswik (1952) suggests attitudes and opinions about those categories would be prevalent in one's mind and therefore influence the immediate perception of the individual. Neuroimaging further identified the amygdala and posterior cingulate cortex as key biological components used to form first impressions (Schiller et al., 2009).

Kern (2019) likewise suggested that the capacity for judgment is not a stand-alone ability and must draw on past inferences and experiences no matter how rapidly the

judgment develops. She contends that judging is a case of knowledge and conditions, and experiences gained through acquiring knowledge enable the formation of judgment (Kern, 2019). This understanding further aligns with Brunswik (1952). The development of this knowledge has been found in early childhood and continues to be the measure one subconsciously uses to form judgments throughout their lifespan.

One example of early childhood development is found Sciutti et al. (2019). In researching cognitive development, Sciutti et al. (2019) studied children's ability to accurately discern an object's weight based solely on visual stimuli. Likened to the ability an adult has to judge the weight of a carton of milk, based on how another person handles the carton, children participants aged 6-10 years old (n = 63) were used to determine at what approximate age this ability developed to a degree of accuracy (Sciutti et al., 2019). Their research found that even infants as young as 14 months old can begin to develop differential responses to actions based on their observations. By six years old, children have already developed the ability to discern between heavy and light objects based on how others handle the object (Sciutti et al., 2019). Their study tends to support the findings of Forman (2022), Freeman and Johnson (2016), and Kern (2019) that the capacity to judge and infer is a learned and developed trait, like Brunswik's (1952) initial contention.

With the understanding that the ability to judge develops early (Sciutti et al., 2019), it is of equal importance to realize that judgment is most often based on visual stimuli and occurs very quickly (Bar et al., 2006). In researching first impressions, Bar et al. (2006) found priority given to visual senses above other senses first noted. Their

research aimed to determine how quickly consistent first impressions are formed based on the understanding that the speed of impression formation directly impacts social interaction. One experiment in their study focused exclusively on the rapid evaluation of faces. The researchers asked participants (n = 60) to view photographs of neutral, emotionless faces and rate the threat the person pictured posed on a scale of 1-5. They found that participants formed consistent first impressions of visual stimuli as quickly as 39 milliseconds (ms), nearly 4/10 of a second. Their results also indicated a correlation between the ratings of 39ms and 1,700ms (1.7 seconds). Participants judged the photos the same regardless of having 39ms or 1,700ms to view and discern their hostility (Bar et al., 2006), meaning individuals came to the same conclusion even when given a more extended evaluation period.

Despite the speed at which humans make initial judgments and first impressions, these judgments require complex information processing (Schiller et al., 2009). With the review of the above literature, it appears that judgments happen very quickly (Bar, et al., 2006), the ability to form judgments and impressions begins at a very early age (Sciutti et al., 2019), and the ability continues to develop as a learned trait (Freeman & Johnson, 2016; and Kern, 2019). It also appears that the judgments are based on previous knowledge (Brunswik, 1952; and Kern, 2010) and are mainly formed through the input of visual stimuli (Bar et al., 2006) processed through known functions of the human brain (Schiller, et al., 2009).

With a basic understanding of perceptions and how they develop, the next section of the literature review exhausts existing studies related to facial hair, the impact facial

hair has on various professions, and the public perception of the police. These three areas were needed for a complete understanding of existing literature and research that occurred along the same lines as this study. The following represents a complete and exhaustive search of the literature.

Facial Hair

Generally speaking, during the early stages of puberty, the male body is flooded with various hormones, including testosterone and androgens, which are the primary regulator of hair growth (Randall, 2008). According to Cummings (2011), facial hair appears uninvited as early as 8 years old, but more typically, substantive facial hair growth occurs around 15 years of age. In addition, Isen, et al. (2015) contend that facial hair develops more rapidly in male adolescents who also demonstrate aggressive traits and a higher level of competitiveness (Singal, et al., 2006).

In exploring why men wear facial hair, Addison (1989) noted that men who wore beards claimed to feel more masculine. Although some men prefer a clean-shaven face, there are several other popular permeations of facial hair. Styles include stubble, goatees, a variety of mustaches from those that terminate at the width of the nostrils to those that cover the entire upper lip and extend downward to the corners of the jaw, sideburns, or full-faced beards, to name a few. Shaving poses a health risk for some, as the hair follicle is a sensory organ that can irritate when touched. For others, shaving often produces shaving-induced skin irritation. A logical starting point for this literature review is to explore the role facial hair plays in society, why some choose to shave while others choose to wear any number of facial hair styles and the perceptions that follow.

Peterkin (2001) documented a comprehensive cultural history of facial hair in his book. His research spread from ancient Egyptians, who viewed hairlessness as an indicator of divinity, to the first appearance and popularization of the goatee in the mid-1950s (Peterkin, 2001). Other authors traced the history of beards and shaving and noted that the first instance of shaving occurred in the Stone Age as depicted by ancient cave pictographs of men using clam shells to pluck facial hair (Fernandez et al., 2013; Hardy, 2019). According to Hardy (2019), hair was first removed from the facial area to prevent ice accumulation which could lead to frostbite. With emerging technologies and the advancement of the razor blade, including electric razors, men shaved as a matter of choice rather than necessity. While authors such as Peterkin (2001) have provided the historical context of facial hair and beards, it is also vital to understand societal views and how those views develop.

Dr. Barnaby Dixson is a lecturing professor of psychology at the University of the Sunshine Coast and has contributed several publications regarding the impact and role facial hair has across various variables. In 2012, he partnered with Dr. Paul Vasey from the University of Lethbridge to further explore the role beards play in the perception of men's age, social status, aggressiveness, and attractiveness (Dixson &Vasey, 2012). In this work, the two ultimately found that while the queried women did not find bearded men more attractive than clean-shaven men, men and women alike attributed older age and higher social status to bearded men than those clean-shaven. They also suggested that beards tended to amplify aggressive facial expressions.

Dixson and Vasey (2012) used photographic stimuli combined with a questionnaire to conduct this research. The photographs depicted similarly aged men with full beards who displayed a happy face, an angry face, and a neutral face. The men were then shaved and photographed again with the same emotions (happy, angry, and neutral). First, the researchers solicited women's ratings of attractiveness among the two groups of bearded or clean-shaven. Respondents utilized a 6-point Likert scale to rate the images. Next, the researchers used the images with a 6-point Likert scale to measure the judgments of aggressiveness between the bearded and clean-shaven men. Then, they similarly measured the judgments of social status, again comparing the images of bearded men to those of clean-shaven. Lastly, the respondents assessed the men's perceived age in the bearded and clean-shaven images. The mean of all four ratings (attractiveness, aggressiveness, social status, and perceived age) of bearded and clean-shaven were the dependent variables in a two-way repeated mixed measures analysis of covariance (Dixson &Vasey, 2012). The findings indicated that beards impact perception of age, social status, and aggressiveness but have no impact on attractiveness (Dixson & Vasey, 2012).

A beard on a man's face artificially widens the appearance of the face (Geniole & McCormick, 2015). In their research, Geniole and McCormick (2015) hypothesized that faces that display angry expressions are noticed faster and are more prominent than those with happy expressions. When investigating the facial width-to-height ratio (FWHR), Geniole and McCormick (2015) found that facial hair did not obscure the FWHR, and respondents could consistently and reliably note aggressive facial expressions. Their

study used stimuli of 25 faces photographed both as clean-shaven and with a beard. The FWHRs were calculated for each photograph and used for further analysis. The respondents then rated levels of aggression upon reviewing the photographs. After statistical analysis, Geniole and McCormick (2015) found that the bearded versions of the photographs were calculated to be much more aggressive in appearance than the non-bearded versions. In addition, the observer's judgments of masculinity between the sets of photographs revealed no reported association between the bearded and non-bearded versions.

The work of Geniole and McCormick (2015) was later validated when Dixson et al. (2022) studied facial hair further. In this work, the team's combined efforts focused on the impact facial hair has on guiding the viewer's attention and visually scanning faces in a crowd (Dixson et al., 2022). The goal of their research was to examine two related questions. The first was to understand how the presence of facial hair impacts the attention given to a face in a crowd, absent any emotional expressions. The second was to understand how the presence of facial hair impacts the detection of anger in a face in a crowd. To facilitate this research, the authors conducted studies to determine if facial hair impacts participants' (N = 419) ability in their visual search of a crowd of people (Dixson et al., 2022).

In Study 1, Dixson et al. (2022) determined that it took the participants longer to search through the faces of a bearded crowd and find those that were clean-shaven than it took for them to search through a clean-shaven crowd to find those that wore a beard. This finding suggested that beards are more distinguishable and more easily noticed in a

crowd. To conduct this study, 52 undergraduate students participated in evaluating sets of photographs that contained both clean-shaven men as well as bearded. The participants viewed 3x3 arrays of photos, with nine photographs. The researchers established the photo arrays in three basic schemes: (a) all nine men were the same (clean-shaven or bearded), (b) eight men were clean-shaven and one was bearded, and (c) eight men were bearded, one was clean-shaven. Using timing devices, the researchers measured the time taken for the participants to evaluate the photos and affirm or deny that the facial hair was the same in all nine. Their findings indicated a significant main effect of photos with a single beard wearer (Dixson et al., 2022).

In Study 2, according to Dixson et al. (2022), forty undergraduate students (n = 40) were used to review the same photos of the same basic pattern used in Study 1. However, Study 2 incorporated bearded and clean-shaven men that displayed either a happy or an angry expression. During the study, the participants reviewed the photos and determined whether an emotional face (angry or happy) was among the arrays. Again, the researchers used timing devices to measure the time taken to make the determination. They then used a repeated-measures ANOVA for correlation. They discovered that, generally, the participants were significantly faster at identifying the emotional faces of clean-shaven men than at identifying the emotional faces of bearded men (Dixson et al., 2022).

When considered together, the studies of Dixson et al. (2022) tend to demonstrate that facial hair impacts the ability of individuals to allocate attention to faces with beards and similarly note that beards tend to mask or delay the perception of emotions among

beard wearers. The work of these researchers becomes relevant to the bearded officer study by substantiating the notion that facial hair impacts individual perceptions about those that wear it.

With particular implications to the bearded officer study, Nelson et al. (2019) explored how children view facial hair and at what age they start developing perceptions and judgments about those wearing it. In their research, Nelson, et al. (2019) sought to understand when the association of facial hair with dominance first began to develop among people. More specifically, they studied when these associations first developed, which associations developed first and if there was any correlation to earlier exposure to facial hair. The participants of this study, ages 2-17 years old (N = 470) and 18-22 years old (N = 164), made judgments regarding dominant traits such as strength, age, masculinity, and mate choice traits such as attractiveness and parenting quality. They found that the younger group (2-17 years old) associated facial hair with dominance but not mate choice. They also found that the older group (18-22 years old) associated facial hair with dominance and mate choice. In both groups, researchers discovered a strong correlation between having a bearded father and associating facial hair with dominance. This finding also reinforces Sherif's original belief and Brunswik's assertion that attitudes and judgments form from the environment one is raised. For example, a child raised with a bearded father as the authoritative household figure may subconsciously associate men with beards as authoritative and dominant.

To collect their data, Nelson et al. (2019) presented side-by-side photographs of the same man with a beard and clean-shaven to the participants and asked them a series

of questions regarding the photographs. To judge dominance traits, researchers asked the participants which of the two men looked stronger, older, most like a man, and most like a dad. Findings indicated that both age groups associated beards with strength. The younger age groups associated beards with being older, and both age groups associated beards with masculinity. The dispersion of parental appearances was evenly spread among both age groups, with neither group indicating a strong correlation between facial hair nor being a dad.

Other researchers, such as Dixson, et al. (2018), also explored beards and their association with masculinity. In their research, these authors assert that beards communicate masculinity, dominance, and aggressiveness (Dixson et al., 2018). The focus of their research was to test the hypotheses that beards provide advantages in hand-to-hand combat by providing a layer of protection from an attacker and conveying a level of fighting ability of the wearer. Relying on the results of combat sports such as the Ultimate Fighting Championship, Dixson et al. (2018) reviewed data from 395 fighters in 600 fights from 2007-2015. Their data indicated that the beard does not provide an advantage in combat via protection nor signal superior fighting ability. The authors ultimately concluded that beards have an exaggerated effect on judgments of dominance, aggressiveness, and masculinity.

Several studies have revolved around the impact a beard has on the attractiveness of the wearer (Barber, 2001; Dixson & Brooks, 2013; Dixson & Vasey, 2012; Saxton et al., 2016; Valentova et al., 2017;). In this vein, Dixson and Brooks (2013) studied how facial hair affects women's perception of a man's attractiveness. Included in the

attraction were measures of health, masculinity, and parenting abilities. Their study, like several others, confirmed that wearing a beard affects judgments about the wearer. Dixson and Brooks (2013) utilized a sample of men photographed with varying facial hair stages. With ranges of clean-shaven, light stubble, heavy stubble, and fully bearded, participants rated the men for attractiveness, healthiness, masculinity, and parenting abilities (Dixson & Brooks, 2013).

In their study, Dixson and Brooks (2013) used photographic stimuli representing ten men with varying ranges of facial hair as described above. Then, using an online survey, participants viewed each face and rated the men for attractiveness, healthiness, masculinity, and parenting abilities. The respondents scored the photos in each category using a six-point Likert scale. After rating the photos, respondents provided biographical information such as age, sex, and ethnicity, among other variables. Using attractiveness, health, masculinity, and parenting abilities as their dependent variables, Dixson and Brooks then used a multivariate analysis of variance (MANOVA) with the degrees of facial hair analyzed as within-subject factors.

The results of the Dixson and Brooks (2013) study revealed that women rated faces with heavy stubble as the most attractive, whereas men rated faces with full beards as the most attractive. Both genders rated full beards as the highest regarding parenting abilities and healthiness. In addition, the researchers found that the level of masculinity increased linearly as the level of facial hair increased, as reported by both genders (Dixson & Brooks, 2013).

Dixson also partnered with Oldmeadow to examine the association between facial hair and the sexist attitudes of men (Oldmeadow & Dixson, 2016). In this work, the authors note the impact beards have on the perception of masculinity, age, social dominance, and aggressiveness and further study the connection between those that wear a beard and display a sexist attitude toward women. Oldmeadow and Dixson (2016) hypothesized that the rate of sexist attitudes among men would increase linearly along with the prevalence of a beard worn by those men.

While at the same time, the opposite would be true – clean-shaven men would have less of a sexist attitude than their bearded counterparts. To test their hypothesis, men from India (n = 309) and men from the USA (n = 223) completed a survey that measured ambivalent sexism and facial hair status. They found bearded men to align with a higher hostile sexist identity than the clean-shaven participants. This study did not address the perception of those with beards versus those without beards. Instead, it examined the views and beliefs of the two and found those with beards more hostile in this study. The authors note that the beard did not necessarily lead to a sexist attitude; instead, those with sexist attitudes were more likely to grow a beard (Oldmeadow & Dixson, 2016).

Others have studied the variations of impact as reported among genders. One noted piece of literature by Łukasz and Moroń (2020) researched the impact facial hair had on intrasexual competition and intersexual attractiveness. Again, using pictorial stimuli, participants in this study were asked to view photos of men with beards or clean-shaven and then indicate their preference between the two. The results of their study indicated a neutral return of women's attractiveness between the two sets. However,

when examining the data collected by male respondents, results indicated an overwhelming preference for the beard (Łukasz & Moroń, 2020).

Last, in their early work, Kenny and Fletcher (1973) explored their hypothesis that a clean-shaven man would be favored over a bearded man across many dimensions. Their study did not support their hypothesis that the bearded man was perceived to be more favorable across seven of the measurements and less favorable on only one (Kenny & Fletcher, 1973). Their study indicated a clear distinction regarding the perception of those with beards and those without beards.

Further review of literature related to the study and research of facial hair and its impact on perception would find facial hair affects the perception of age (Wolgalter & Hosie, 1991), the perception of a good marital partner (Barber, 2001), to influence mate selection (Valentova et al., 2017), and the perception of aggressiveness (Saxton et al., 2016). Research has gone so far as to discover that facial hair impacts the perception of guilt among defendants in criminal proceedings (Conti & Conti, 2004). When viewed in culmination, it becomes clear that facial hair can influence one's perception of the wearer.

Many of these studies paint a positive view of those wearing facial hair. For example, Dixson et al. (2017) suggest that beards indicate that the wearer is more masculine than a clean-shaven man, and Nelson et al. (2019) suggest that beard wearers are stronger, man-like, and dad-like. However, some researchers have discovered a negative view of beard-wearers. In one study, Hellmer et al. (2018) studied the effects of

variables, including facial hair, that led to individuals' hostile attitudes. His study found that facial hair led to increased hostilities toward the wearer.

As previously stated, it is important to understand the historical context and societal views about those wearing beards. Studies to date indicate that perceptions about those that wear beards tend to polarize toward either an attitude of acceptance (Nelson et al., 2019) or an attitude of rejection (Hellmer et al., 2018) which remains fundamentally grounded within Sherif's originally penned social judgment theory. This section on facial hair and beards has formed the first pillar of the triad discussed earlier. With this section complete, the following section examines the impact beards have on various professions. Of note is that none of the professions are within the law enforcement or public service community.

Facial Hair Impact on Various Professions

Based on the previous section, the opinions and judgments of facial hair and beards are widespread, and, at the individual level, several factors can lead to forming these judgments. This section explores what people think about others that wear beards in relation to the wearer's profession. It is important to note that there is not much research in this particular area, but researchers have explored areas such as the medical field, sales, service, and customer service industries (Kim et al., 2018; Magnini, et al., 2013; Mason & Mason, 2017; Mittal & Silvera, 2020). The literature review in this section examines these studies and their findings.

To start, Hellström and Tekle (1994) establish that facial hair not only impacts the perceived occupation of the wearer but also affects the judgment of personal qualities of

those that wear a beard. In their research, the authors examined judgments based on facial attributes, including facial hair, as seen in photographs. Additional variables such as glasses and hair were also considered, along with all possible combinations of the three (beards, glasses, and hair). According to Hellström and Tekle (1994), beards are generally more accepted in employment settings such as laboratories, concert halls, and classrooms than in banks, board rooms, and courts.

To examine this phenomenon, the authors used facial photographs that displayed images of different men with the presence or absence of glasses, hair, and a beard. Respondents (n = 75) were either first-year psychology students or employed in a mental health environment. Using a 6-point Likert scale, the respondents rated each photo in terms of the appearance of honesty, intelligence, helpfulness, attractiveness, leadership qualities, congeniality, and masculinity (Hellström & Tekle, 1994). The second portion of the study required respondents to view photographs and choose the most likely occupation of the man in the image. Occupations such as physician, professor, engineer, managing director, factory worker, artist, pastor, farmer, salesman, and bank clerk were among the available responses. Application of the appropriate statistical analysis revealed that subjects who wore a beard and glasses were generally viewed as more highly educated and held higher-level professions, such as physicians, pastors, professors, and psychologists. The findings further revealed that the same subjects were less likely to be employed as factory workers, farmers, or salesmen (Hellström & Tekle, 1994).

Souza et al. (2003) investigated the impact facial hair had on forming impressions and opinions about the wearer regarding the prospect of employment in general. During

their study, participants viewed photographs of men with four stages of facial hair growth ranging from clean-shaven, mustached, goateed, or bearded. Utilizing a 7-point Likert scale, the respondents rated each of the photos. In this study, the researchers found beardedness associated with older age and greater responsibilities. The respondents, totaling 50 managers who made hiring decisions, also preferred clean-shaven men over the other three growth categories. This study was the first of many to indicate that facial hair impacted the impressions made about the wearer.

While conducting research within the medical community, Mason and Mason (2017) theorized that a physician's appearance impacted the satisfaction level of the physician's patient. To test the theory, they conducted a quantitative study, including a survey of patients (n=295), that asked questions about the physician's appearance. The survey included questions about the wear of a beard. They found that neither the physician's attire nor physical characteristics, such as facial hair, significantly influenced the patient's opinion of the physician or the reported level of care satisfaction. These findings would align with Sherif's attitude of neutrality.

In a similar study, Mun et al. (2019) validated the results of Mason and Mason and found that patients had no preference regarding a physician's wear of a mustache or a beard. In their independent study, these researchers examined the preference of neurosurgery patients regarding their surgeon's appearance. In this study, patients (n = 100) participated in a 13-question survey. The survey asked the participant about the surgeon's appearance, including a mustache and a beard. The results of their study indicated that the patients had no preference regarding wearing a mustache or a beard.

Mittal and Silvera (2020) studied how customers perceive facial hair in the sales and service industry. Their study sought input from respondents (n = 127) who viewed several images of sales personnel with varying levels of facial hair, including variances from clean-shaven to full-faced beard. The respondents rated the pictured salespersons on their perceived level of expertise and trustworthiness based solely on a review of the photos. Their study indicated that salespersons who wore a beard appeared to have a higher level of expertise than those who were clean-shaven. This finding led to the additional conclusion that bearded salespersons were perceived as more trustworthy and therefore held a higher likelihood of being able to sell a product (Mittal & Silvera, 2020). This result aligns with Sherif's attitude of acceptance.

In addition, Evans et al. (2000) studied the reverse of Mittal and Silvera by researching the first impression of customer service professionals and sales personnel about their customers. When researching the first impressions about customers, Evans et al. (2000) theorized that the first impression about the customer was a starting point for sales personnel that could be used to adapt to the customer's needs, thus completing a sale. They examined the salesperson's effectiveness as the first impression about the customer impacts it. The study by Evans et al. (2000) incorporated 116 sale dyads that included a salesperson and a consumer in a simulated sales setting. The salespersons were practicing life insurance agents, and married couples filled the role of the consumers. The researchers found aspects of first impressions to have a positive relationship with the satisfaction level of the sales encounter.

Most studies reported favorable, or at least negligible, evaluations of beard wearers. Noted exceptions were discovered within the food-service industry and within the hotel industry. Within the food-service industry, the data showed a preference for clean-shaven men to be cooks and servers (Kim et al., 2018). When researching the impact facial hair had within the food service profession, Kim et al. (2018) used a wide variety (5) of facial hair attributes, including clean-shaven, light stubble, heavy stubble, light beard, and full beard. Their research focused on food handlers, the customers perceived level of hygiene and cleanliness, and overall customer satisfaction related to the facial hair-wearing handlers. To conduct their research, they used a one-way ANOVA to calculate the differences and relationships of respondents (n = 514) answers to a Likert-type survey. Their research utilized an experimental design that accounted for between-subject factors present when the respondent had an individual preference or no individual preference for facial hair. Their results indicated significant differences across the five variances of facial hair levels, which indicated customers perceived the clean-shaven food servers as having higher cleanliness standards (Kim et al., 2018). In this case, the findings align with Sherif's attitude toward rejection.

Likewise, in the hotel industry, Magnini et al. (2013) found that hotel guests perceived greater confidence and assurance ability to hotel staff that was clean-shaven over staff members that displayed any level of facial hair. Their research also found significant differences in the effects that beards produced among Caucasian beard-wearers versus African American beard-wearers. To facilitate their study, they presented photographs to the research participants. The photographs displayed a variety of men

with varying levels of facial hair. They asked the respondent to compare and rate the photographs in attractiveness, genuineness, and self-assuredness. Their findings indicated a generally negative view of beard-wearers, although slightly less negative among African American men compared to clean-shaven men. Their results indicated to the hotel industry that hotel firms should forbid their employees from wearing beards by creating, managing, and enforcing strict grooming policies to improve their employees' facial attractiveness. They believed adherence to this guidance would increase customer satisfaction ratings (Magnini et al., 2013). This finding also aligns with Sherif's attitude toward rejection.

Additionally, researchers have, as a by-product, studied the impact facial hair has on the honesty and competency of politicians (Chan et al., 2021). Chan et al. (2021) sought to understand the role masculinity plays in the perception of politicians. To do so, the researchers identified markers of masculinity, including facial hair, that suggested masculine-looking politicians were less likely to follow through with legislative proposals and less likely to be controlled by lobby and interest groups post-election. Chan et al. (2021) studied known aesthetic indicators of masculinity such as facial hair, facial width-to-height ratio, and baldness observed with men in a political office affected the public's general perception of those men.

To conduct their study, these researchers analyzed the results of an online survey in which participants (n = 157) rated active political members between 2007 and 2014. Their first focus was on political members' perceptions of honesty and competency (Chan et al., 2021). In the survey instrument, following demographic information input,

the participants viewed a range of photos, all of whom were known political figures. The participants then rated the figures based on their image utilizing a 7-point scale that scored from extremely low to extremely high. The ratings captured measures of characteristics such as: *handsome*, *fair*, *sincere*, *qualified*, *trustworthy*, *honest*, *ethical*, *attractive*, and *charming*. According to Chan et al. (2021), the participants were not familiar with the faces shown and were similarly unaware that they were Swiss political leaders. Nor were the respondents made aware they were evaluating political figures. Their findings indicated that facial hair was associated with a lower perceived level of honesty (Chan et al., 2021).

While not a study of facial hair, Paesen et al. (2019) explored how the law enforcement profession's culture compared to non-law enforcement organizations. Paesen found that even among professions and companies with a similar organizational structure as the police, the culture within the law enforcement profession was unlike all others. This finding illustrates why the results of previous studies of facial hair in non-law enforcement professions may not summarily present the same results in the law enforcement profession. For example, Mason's 2019 study on the medical profession may not indicate similar findings in the law enforcement community. The neutral attitude toward beards in the medical profession may not be present in the law enforcement profession even though the organizational structure of hospital staff is like that of a police department, and hospital workers face various complex issues like those of police officers.

The limited number of studies regarding the influence facial hair has in non-law enforcement professions indicates the need for further research in this area. Several studies attempted to correlate male attractiveness with facial hair and beards. However, except for the exceptions above, only some used those ratings to assess satisfaction levels across any given profession. This section has summarized the findings of these studies regarding non-law enforcement professions. The following section examines what attributes of police officers impact the public perception of the police.

Public Perception About the Police

While using the previously mentioned search techniques and parameters, all searches failed to produce literature, research, or data regarding the impact facial hair or beards have on the public perception of bearded officers. Previous research identified the ability beards have to increase the perceptions of maturity, health, masculinity, and confidence (Dixson et al., 2013; & Pellegrini, 1973), but none of the research applied these attributes to the law enforcement profession. Numerous studies have sought to identify variables about the police that impact the public perception of the police (Blaskovits et al., 2021; Simpson, 2018; Thielgen et al., 2020). Similarly, many studies identify specific events or actions of the police that have an impact on the public perception of the police (Carmichael et al., 2021; Moule et al., 2019). This section examines these studies and concludes the exhaustive literature review required to provide a foundation for the bearded officer study.

Understanding what drives the public perception of the police is essential for law enforcement personnel and administrators to grasp to begin repairs of the fractured

relationship witnessed in the early 2020s. According to Bates et al. (2015), the attitudes and perceptions that the public has toward the police profoundly impact how the public feels about the police and the way the public behaves during police encounters.

In addition, some perceptions about the police form solely based on observed content in news and social media (Morgan & Shanahan, 2010). This phenomenon was observed across the United States on many occasions after events such as the police shooting of Michael Brown in Ferguson, Missouri, in 2014 or the killing of George Floyd in Minneapolis, Minnesota, in 2020. Both events led to nationwide protests of the police primarily due to the observed content portrayed in the media.

Carmichael et al. (2021) also explored other factors that impact the public perception of the police. These researchers studied how perceptions of police behavior during contact with the public changed depending on specific demographics and the contact location. While having nothing to do with the physical appearance of the officer, this study is critical because it explores varying factors that tend to alter the public perception of the police. The study results found specific demographics and ethnic groups to believe they were mistreated, and that the officer's conduct was unacceptable. A multivariate analysis produced findings that indicated youth, African Americans, and people living in large urban areas were much more likely to feel as though they were mistreated and were victims of police action that fell outside the parameters of proper police conduct (Carmichael et al., 2021).

The officers' actions clearly can influence the public perception of those officers (Carmichael et al., 2021; Moule et al., 2019). However, the bearded officer study

attempts to identify what visible features or attributes about an officer impact the public perception of that officer. Vaitkeviciute and Dobrzinskiene (2022) note that the image of an officer, that is, the physical appearance, can affect emotions, behavior, and relationships with that officer and the organization represented. In their research, they found that the represented image of the officer and the department can be formed not only by personal experience and media reports but also by the physical appearance of the officer (Vaitkeviciute & Dobrzinskiene, 2022). There have been several studies that further explore this phenomenon.

For example, in what he termed the Police Officer Perception Project (POPP), Simpson (2017) explored the effects of aesthetic variables and their association with the public perception of the police. The experimental methodology used by Simpson examined variations in uniform wear, such as an officer in uniform versus a detective in civilian clothes, and variations of patrol strategies, such as foot, bicycle, or vehicle, to evaluate differences in the public perception of the police. The study's methodology included survey participants (n = 307) that viewed images of police officers. The images depicted officers in various attire and using differing patrol strategies. The participants rated the images of those officers in terms of aggression, approachability, friendliness, respectfulness, and accountability. The results of his work indicated more favorable perceptions among officers in uniform and on foot or on a bicycle than any other combination (Simpson, 2017).

Additionally, Thielgen, et al. (2020) researched how others perceived uniformed police officers with visible tattoos. According to McMullen and Gibbs (2018), most

police agencies have tattoo prohibitions or guidelines written into their dress and appearance standards. Thielgen et al. (2020) conducted a study that included the use of inmates (n = 98) that viewed photographs of four officers (men and women). The photographs depicted the same officer with either clear skin or digitally added tattoos, and the inmate was to rate each photo based on the officer's appearance. The ratings used in the survey instrument solicited binary responses to questions related to job performance, command presence, trustworthiness, charisma, and likeability. Their study found that visible tattoos had a detrimental effect on the attitudes toward the officers. In terms of social judgment theory, this would indicate a general attitude of rejection (Sherif & Hovland, 1961). The underlying results of this study are important to the facial hair study because they suggest that an element of appearance, such as tattoos, can impact attitudes toward officers and the public perception of those officers.

Others, such as Simpson (2018), took the individual officer out of the equation and evaluated the effects of accouterments such as vests, gloves, batons, sunglasses, and hats on the public perceptions of the officers that wear them. The research conducted by Simpson went so far as to study the varying effects of the differences in uniforms worn by police agencies across the United States. With the focus being accouterments of the officer, Simpson utilized data from participants (n = 307) of the Police Officer Perception Project (Simpson, 2017), where the participants viewed 64 images of officers and rated the officers in terms of aggression, approachability, friendliness, respectfulness, and accountability. Simpson (2018) concluded that the resulting evidence indicated that officer appearance variations correlated to the public perception of those officers. Like

the Thielgen et al. (2020) study above, the work of Simpson (2018) further collaborates that the appearance of the officer has a direct relationship with the public perception of the officer.

In a similar study of various features related to police militarism, such as uniforms, armament, and vehicles perceived by the public, Blaskovits et al. (2021) found the public to hold negative perceptions of officers that appeared militaristic. In their study in Canada, participants (n = 2,000) viewed images of officers with varying degrees of attire and armament. Variations of the officer in the images ranged from officers with a soft appearance, such as a polo-style shirt with an embroidered badge and no visible weapon, to a harder appearance, such as a complete tactical kit that included body armor, ballistic helmets, eye protection, baklavas, and visible assault rifles. Upon viewing the images, the participants rated each officer's personal qualities, skills they possess, behaviors they exhibit, and the behavioral intention of the participant toward the officer. The published findings indicated that the public negatively perceives hard appearances regarding trust, morality, and approachability. However, the hard appearances also were perceived to be more confident, strong, and capable of handling dangerous situations (Blaskovits et al., 2021). This study also corroborates the idea that the appearance of an officer can alter public perception of the officer.

Summary and Conclusions

Attitudes and perceptions influence behavior (Dixson & Brooks, 2013; Kenny & Fletcher, 1973; Oldmeadow & Dixson, 2016). Initial judgments and perceptions occur rapidly and are based on appearance (Bar, et al., 2006; Freeman & Johnson, 2016; Sciutti

et al., 2019). Therefore, it stands to reason that the appearance of an officer impacts the initial judgments and perceptions about that officer, which further influence the behavior toward the officer. These findings align with the original underpinnings of Sherif and Brunswik and are worthy of further study. Law enforcement officers and administrators continue to seek ways to strengthen community relations and foster teamwork in maintaining good order and discipline in society. Understanding what aspects of the police, including physical characteristics and appearance, may have in strengthening or damaging their relationship with the community is a fundamental and critical step towards restoration.

The major themes found in the above literature review are categorized into three areas, (a) facial hair, (b) the impact facial hair has on various non-police professions, and (c) varying factors that influence the public's perception of the police. The first two areas illustrate well that beards can influence the attitudes, opinions, and beliefs of others about the said wearer of the beard. Those areas have summarized societal views of beards and how they change across time and demographics. In addition, it has explained the impact beards have across various professions, with some being positive (such as sales), neutral (such as medical), or negative (such as food service). However, no such data was found solely regarding the impact of beards on the public perception of uniformed officers wearing beards.

Several studies exist about the public perception of the police, which further illustrates the need for this type of data. Researchers, as outlined above, have examined the ability of uniform wear, accouterments, weapons, and even the method of the patrol

to persuade the public perception of law enforcement. With the abundance of research conducted in this area, the literary search strategies outlined above resulted in no findings regarding facial hair or beards worn by the police. The bearded officer study fills this void by providing data to interpret further the impact beards have on the public perception of the police. This study targets the population group of a county in northern California and can be easily replicated for use across any given population group. Utilizing a series of photos, like several studies above, an analysis of variance was used to indicate if the public has an attitude of acceptance, neutrality, or rejection. Chapter 3 further presents and describes the methods and analysis used in this study.

Chapter 3: Research Method

Introduction

In this exploratory quantitative study, I explored the strength of the relationships and the differences between public perception about bearded versus clean-shaven officers. Three independent but related scales were developed to further evaluate these relationships: the appearance scale, behaviors scale, and feelings scale. These scales were used to categorize the responses from participants into like measures for analysis. The study's results will help to understand the relationship between facial hair on an officer (or no facial hair) and public perception about officers, as well as the impact beards worn by officers have regarding public perception of those officers.

In Chapter 2, I explored studies of facial hair among other professions and how the presence of facial hair impacts the relationship to similar variables. Exhaustive research revealed no existing literature regarding the impact facial hair or beards worn by police has on public perception of police. This study fills the void in the existing literature regarding the impact of beards on public perception of police. In this chapter, I thoroughly examine the methodology used to obtain the data. In addition, this chapter includes sections on the research design and rationale; the population group of the study; sampling and sampling procedures; procedures for recruitment, participation, and data collection; and the instrumentation and operationalization of constructs.

Research Design and Rationale

This study incorporated an experimental design. I used appropriate univariate, bivariate, and multivariate statistical techniques to answer the research questions. These

techniques examined the strength of the relationship between the dependent variables (appearance of officers) and independent variables (sociodemographic, history, and bias) in terms of the public's perception of both. Multiple levels of statistical tests were conducted on the variables. First, statistical tests were used to indicate the presence of any relationship between given variables. This set of tests analyzed any relationship whatsoever between the variables, even if it was a negative relationship. The next level of analysis was used to fully understand the strength and influence the relationship of the independent variables had on the dependent variables. A negative, null, or positive relationship was further identified to include the strength of the relationship and the effect of the independent variable on the dependent variable. The final level of analysis included the introduction of control variables to determine if the findings were upheld while controlling for these data.

This design was connected to the research questions by providing the ability to quantify the levels or measure in which the image of an officer, with a specific and intentional focus on facial hair, correlates to attributes of the officer. The quantification allowed prediction, with a certain degree of reliability, of public perception of an officer in terms of appearance of the officer, behaviors of the officer, and feelings of the respondent. The design choice was also consistent with other research designs used to advance knowledge in the discipline.

In this study, *public perception* refers to any positive, null, or negative impressions, judgments, or feelings about the officers in the displayed images. When given a metric value of 0–10, these perceptions were used as dependent variables of

which the predictor variables, the independent variables in this case, were tested. These predictor variables consisted of age, degree, ethnicity, gender, income, and race and were available for selection in the survey as either a drop-down or fill-in response. Socioeconomic demographic variables such as these were appropriately measured by the following: age (in years), degree (0 = no, 1 = yes), ethnicity (0 = no, 1 = yes), gender (0 = male, 1 = female), income (0 = no, 1 = yes), race (0 = non-White, 1 = White).

Dependent variables are categorized into one of three scales, (a) the officer's appearance, or appearance scale; (b) the predicted behaviors of the officer, or behaviors scale; and (c) the feelings of the respondent, or feelings scale. The first group of dependent variables, which comprised the appearance scale, were created through public perception of an officer in terms of attributes of the officer appearing to be reasonable, compassionate, understanding, and professional. The scores from this group of variables were then calculated into a composite measure to create a subscale variable of appearance and return a value of 0–40. The second group of dependent variables, which comprised the behaviors scale, were also be created to measure public perception of an officer in terms of behaviors the officer may demonstrate, such as using excessive force, being corrupt, abusing their position, and having a propensity to lie. Likewise, the scores from this group of variables were collected into a composite measure to create a subscale variable of behaviors and returned a value of 0–40. The third group of dependent variables, which comprised the feelings scale, were created through the feelings invoked in the respondent when viewing the image of an officer. The invocation of feelings of anxiety, hostility, compliance, and trust were gathered through the survey instrument.

The scores from this group of variables were also collected into a composite measure to create a subscale variable of feelings and return a value of 0–40. Finally, an additive composite measure was constructed to display the total sum of all dependent variables to provide a possible range from 0 to 120 regarding overall perception about the officer. Among all variables was a further division between those of a clean-shaven officer (indicated by a 1 following the variable name) and those of a bearded officer (indicated by a 2). With this naming convection, one can rapidly understand for example that PRO1 would refer to the level of professional appearance of a clean-shaven officer, whereas PRO2 would indicate the variable was related to a bearded officer. Likewise, TOT1 refers to the sum of all dependent variables related to a clean-shaven officer, and TOT2 refers to the sum of all dependent variables related to a bearded officer.

With these outlined variables used for examination, the design choice minimized time constraints by gathering the data in a brief online survey, just 37 questions, which increased participation and completion of the survey and reduced respondent fatigue. No resource constraints were identified, and the only predictable time constraints included the time needed to advertise the survey and collect an adequate number of responses, and the length of time it took for each respondent to complete the survey. The latter constraint was negligible as predicted Beta tests of the survey indicated completion between 5 and 10 minutes.

Methodology

Population of the Study

The target population of this study was the population in and around a county in northern California. This county is in the northern portion of California and has a reported population of approximately 180,000 residents over 18 (city-data, n.d.). Due to the distribution method of the survey used for this study, not all residents were solicited for input. The survey instrument was advertised through one of the counties police department Facebook page. At the time of the survey, the page advertised approximately 15,000 followers. These followers comprised the primary population group targeted in this study. Without request, and unexpectedly, a local news channel published an article based on the survey advertisement on the police department's Facebook page (Baker, 2023). This significantly increased the population potential as the news channel presented with approximately 236,000 followers.

Sampling and Sampling Procedures

A convenience sampling of respondents was used for this study. G*Power (Version 3.1.9.7) was used to perform a power analysis and determine the viable respondent sample size needed to produce statistically significant results (Faul et al., 2007). For the calculation, the criterion for significance was set at $p = .05$ given that the analysis would be non-directional and an effect in either direction could be interpreted (Huck, 2012). For an 80% likelihood that significance would be found in the sample, the conventional statistical power level was set to .80 (Cohen, 1977). Results of the analysis

indicated that for a small effect size f of .02, the sample size would need to reach 395 participants.

During the collection period, the survey instrument was available online and advertised through the social media sites of the police department and news channel. The survey remained open to the public for nearly 3 weeks, at which time the survey closed and was no longer available for input. Responses were captured in online storage and automatically sequentially numbered in order of completion date and time.

The survey instrument was used to gather all data related to the dependent variables and independent variables of this study. Sociodemographic information related to the independent variables of age, ethnicity, gender, and race were collected by the survey instrument. In addition, respondents populated the dependent variable data by reviewing photos of officers and establishing numeric values based on a Likert scale with a range of 0 to 10.

Procedures for Recruitment, Participation, and Data Collection

Advocacy provided through the social media site administrators of the police department page included an advertisement and solicitation for their followers to complete the brief online survey. In addition, a local news channel published an unsolicited article about the study and provided a link to the survey embedded within their article. Participation in the survey was voluntary, and the survey instrument began with a notice of consent disclaimer that the participant acknowledged before continuing to the instrument. The survey (Appendix A) collected data anonymously and then aligned into six sections:

- Section 1, the appearance scale, captured the respondent's impression of the officer with regards to appearance of being reasonable, compassionate, understanding, and professional using a Likert scale that ranged from 0 (least favorable) to 10 (most favorable) with 5 being the neutral response. Section 1 contained four questions. Each question contained a photo of an officer that is clean-shaven and then presented later with a photo of the same officer with a beard. The clean-shaven photos and the bearded photos were presented randomly to avoid the detection of any predictable pattern.
- Section 2, the behaviors scale, contained four questions that requested the respondent to speculate as to a likely behavior of the officer, such as using excessive force, being corrupt, abusing their position, and having a propensity to lie. These questions were presented in the same fashion as Section 1, each with a photo of a clean-shaven officer and a photo of the same officer with a beard.
- Section 3, the feelings scale, contained the last series presented with photographs. These four questions sought to record feelings invoked in the respondent when viewing the image of the officer, such as anxiety, hostility, compliance, and trust. Section 3 was presented similarly to the first two sections.
- Section 4 solicited sociodemographic information such as age, degree, ethnicity, gender, income, and race.
- Section 5 captured background information from the respondent such as exposure to crime (Have you ever been the victim of a crime?), contact with the police

(Have you ever called the police for help? Have you ever received a traffic ticket? Have you ever been arrested?).

- Section 6 captured potential biasing data: Are you, or is anyone in your immediate family in law enforcement? Do you wear a beard? Do you like beards? These inputs were used as control variables in the model to determine if any of the above influenced, biased, or otherwise impacted the findings.

Once complete, the instrument displayed a message thanking the respondent for participating in the survey and instructing the respondent to close the survey window. Once the window was closed, the data were automatically transmitted and saved onto a secure Google Drive. Subsequent contact or debriefing of the respondents was not required, but contact information was presented should the respondent have questions or further comments. No subsequent contact with any respondent was made through any of the available means. The results of the survey will be made available to the counties law enforcement agencies to publish at a later date.

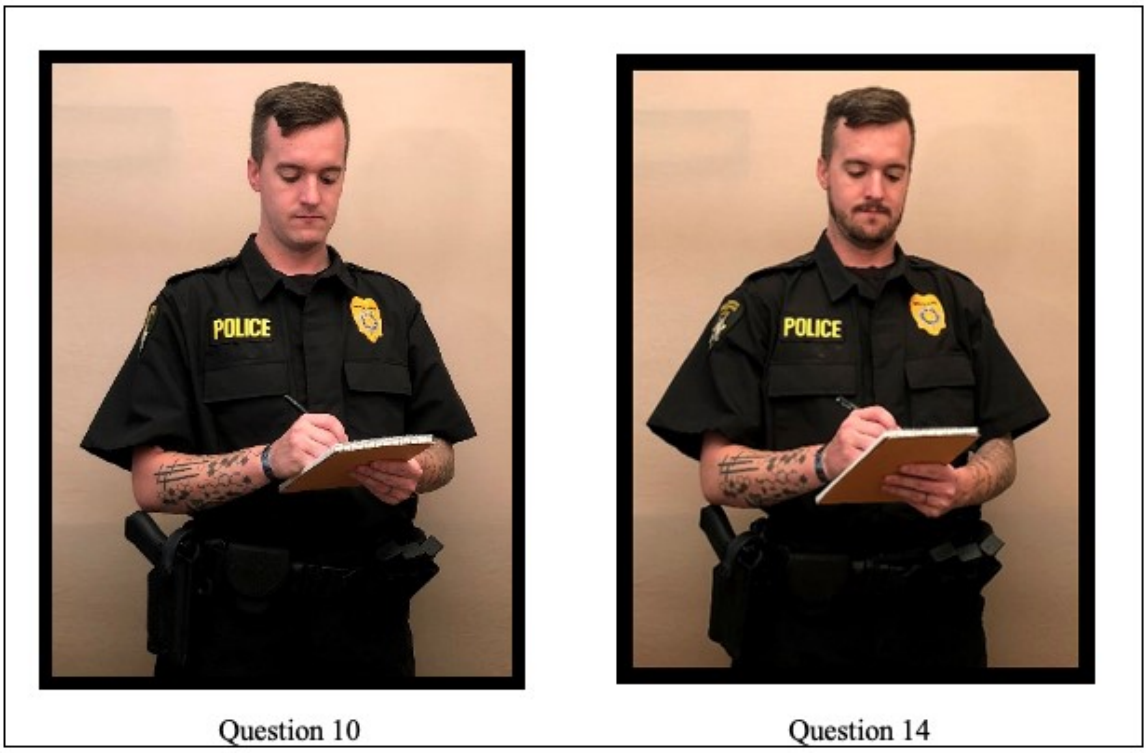
Instrumentation and Operationalization of Constructs

As detailed in Chapter 2, several researchers have investigated multiple phenomena that contribute positively or negatively to public perception of police. In addition, researchers have similarly focused their efforts on understanding the role beards have on public perception about the wearer. These studies conducted by others became the basis for the development of this research design. For example, Thielgen et al. (2020) researched how uniformed police officers with visible tattoos are perceived by others. To do so, the researchers conducted a study that surveyed inmates. In a survey, inmates were

presented with images of the same officer with and without visible tattoos. The respondents rated the officers regarding job performance, command presence, trustworthiness, charisma, and likeability. The bearded officer study follows this model but instead of tattoos uses facial hair. See Figure 1 for reference.

Figure 1

Representative Sample Photographs



It was important to utilize nearly identical images of the same officer, while asking the same question of the respondent. In this example, the only visible difference is that the officer in Question 10 is clean-shaven, and the officer in Question 14 is bearded. The text of both questions was identical and asked the respondent to rate, on a scale of 0-10, the likelihood the pictured officer would be corrupt.

Other studies, such as Simpson (2018), used images of officers with varying accouterments. Their study used various combinations of vests, gloves, batons, sunglasses, and hats to determine similar attributes such as aggression, approachability, friendliness, respectfulness, and accountability. Like the Thielgen, Shade, and Rohr study, the Simpson study used the physical appearance of the officer to evaluate the measure levels of the public perception of those officers. These studies and others like them formed the basis for the development of the bearded officer study and ensured the questions within the survey instrument were properly designed and aligned with the appropriate search questions.

During the construction of the scales used in the analysis of this survey, all variables that represented responses based on images of clean-shaven officers were identified by the three-letter variable name immediately followed by a 1 (i.e., PRO1). All variables that represented responses based on images of bearded officers were identified by the three-letter variable name immediately followed by a 2 (i.e., PRO2). This naming convection allowed rapid identification and the ability to sort variables into the appropriate clean-shaven or bearded scales such as APP1 or APP2. To minimize internal error and ensure internal consistency was obtained from these scales, a Cronbach's Alpha reliability analysis was performed on all clean-shaven and bearded data. Both sets of data received an alpha greater than .70 which indicated a strong internal consistency as the bearded data reported $\alpha = .925$ and the clean-shaven data reported $\alpha = .924$.

Data Analysis Plan

The statistical software SPSS by IBM was used for data analysis. All appropriate univariate, bivariate, and multivariate statistical techniques were employed. Although SPSS can account for missing data, the survey design in Google Forms mandated the inclusion of a selection for any identified dependent variable. All independent variable input were voluntary, and the survey could be saved and submitted with incomplete answers related to age, ethnicity, and gender for example, but responses were mandatory in all areas of the dependent variables, or the survey could not be submitted. In addition, SPSS has an internal function that offered the ability of data cleaning and screening found in the record and filed operations nodes in the program ("IBM", 2021), but was ultimately not used due to the parameters set in the Google Forms survey instrument.

This study sought to answer a single foundational question: Does a beard on a uniformed officer impact the public's perception about that officer? It was guided by three supporting research questions (RQ) and their hypotheses (H):

RQ1: Is there a relationship between a beard on a uniformed officer and one's perception about the appearance of the officer?

$H_0$1: There is no significant relationship between a beard on a uniformed officer and one's perception about the appearance of the officer.

H_a1: There is a significant relationship between a beard on a uniformed officer and one's perception about the appearance of the officer.

RQ2: Is there a relationship between a beard on a uniformed officer and one's perception about likely behaviors of the officer?

$H_0$2: There is no significant relationship between a beard on a uniformed officer and one's perception about likely behaviors of the officer.

H_a2: There is a significant relationship between a beard on a uniformed officer and one's perception about likely behaviors of the officer.

RQ3: Is there a relationship between a beard on a uniformed officer and one's individual feelings about the officer?

$H_0$3: There is no significant relationship between a beard on a uniformed officer and one's individual feelings about the officer.

H_a3: There is a significant relationship between a beard on a uniformed officer and one's individual feelings about the officer.

Multiple univariate, bivariate, and multivariate examinations were conducted to fully explore the relationships between the independent variables and the dependent variables which are more fully explained and detailed in Chapter 4.

Threats to Validity

The primary threat to the study's external validity was the resulting sampling bias that occurred with the entire target population gathered through an online survey advertised and administered through social media. This selection process naturally eliminated county residents who did not subscribe to social media or were otherwise unaware of the survey or did not have access to the online survey. In addition, some residents may have been aware of the survey and could have completed it but ultimately chose not to do so. This survey sought to determine the perception of the residents of the

county, not just those who follow social media and had the ability and desire to complete a survey.

Ethical Procedures

Data collected during this study was protected and followed the procedures and methods approved by Walden University's Institutional Review Board (IRB: 06-27-23-102269). Before participating in the survey instrument, by design, participants read and acknowledged an informed consent statement which included information about the purpose of the study and a reminder that participation in the study is voluntary. Participants were also made aware that they could have ended the survey at any time by simply closing out of the survey prior to completion. This act would forfeit all collected data from their survey and forbid it from being sent to the secured online drive, as only completed surveys were forwarded and stored for analysis. Responses were anonymous and confidential, and no identifying data about the respondent was requested, except demographics collected as the independent variables. Completing the survey instrument had little chance of causing physical or psychological harm to the participants.

Summary

This chapter detailed the design and methodology of the method of inquiry for the study. Using an online survey advertised and made available to the residents of the county through social media, demographical data was collected to complete the independent variables of this analysis. The independent variables were then tested with SPSS to examine the strength of any relationship between the independent variables and the dependent variables. These tests satisfied the research questions and provided a

quantifiable understanding of the relationship that beards on uniformed officers had on the public perception of those officers.

In Chapter 4, the results of the tests are fully explored. Complete analysis of how the independent variables interact with the dependent variables are fully detailed. In addition, each research question and its hypotheses are assessed to determine if the null hypotheses are to be accepted or rejected.

Chapter 4: Results

Introduction

The purpose of this exploratory quantitative study was to examine any relationship between a beard worn by a uniformed law enforcement officer and public perception of that officer. I sought to answer a single foundational question: Does a beard on a uniformed officer impact public perception about that officer? Perception was measured through examination of three separate areas categorized as officer appearance, likely officer behavior, and feelings of the respondent when presented with the officer. Consistent with similar studies (Dixson & Brooks, 2013; Dixson &Vasey, 2012; Dixson et al., 2022; Geniole & McCormick, 2015; Nelson et al., 2019), these three areas were explored through analysis of data gathered from an online survey. Further, the areas were intentionally aligned to, and specifically sought to answer, the following three research questions and their hypotheses:

RQ1: Is there a relationship between a beard on a uniformed officer and one's perception about the appearance of the officer?

$H_0$1: There is no significant relationship between a beard on a uniformed officer and one's perception about the appearance of the officer.

H_a1: There is a significant relationship between a beard on a uniformed officer and one's perception about the appearance of the officer.

RQ2: Is there a relationship between a beard on a uniformed officer and one's perception about likely behaviors of the officer?

$H_0$2: There is no significant relationship between a beard on a uniformed officer and one's perception about likely behaviors of the officer.

H_a2: There is a significant relationship between a beard on a uniformed officer and one's perception about likely behaviors of the officer.

RQ3: Is there a relationship between a beard on a uniformed officer and one's individual feelings about the officer?

$H_0$3: There is no significant relationship between a beard on a uniformed officer and one's individual feelings about the officer.

H_a3: There is a significant relationship between a beard on a uniformed officer and one's individual feelings about the officer.

This chapter details the data collection involved in this study. Data collection topics include the time frame of the collection, discrepancies from the plan presented in Chapter 3, a presentation of baseline descriptive and sociodemographic characteristics of the sample, how representative the sample is of the county population, and the results of basic univariate, bivariate, and multivariate analyses that tend to justify inclusion of covariates used in the model. This chapter also presents the results of the analysis. The results are presented in terms of descriptive statistics that appropriately characterize the sample, an evaluation of statistical assumptions appropriate to the study, and statistical analysis findings organized by the research questions. The analysis of findings includes the exact statistics and associated probability values, the confidence intervals around the statistics, and the effect sizes. In addition, the results of post-hoc analyses of statistical

tests are reported along with additional statistical tests of hypotheses that emerged from the analysis of main hypotheses, as appropriate for the study.

Data Collection

On June 27, 2023, the Walden University Institutional Review Board (IRB) approved this study (#06-27-23-102269). The survey instrument was published online and activated on July 8, 2023, at approximately 12:45 p.m. PST. The survey received the first response approximately 1 hour later. Data were collected in accordance with the collection plan previously outlined in Chapter 3, with no discrepancy or deviation. Initial advertisement and recruitment of participants for the survey was produced through one of the counties police department Facebook pages, which had about 15,000 followers at the time of release. The survey received 69 responses within the first 24 hours. On July 12, 2023, a local news station published an unsolicited online article about the survey and provided a link to anyone interested in taking the survey (Baker, 2023). The news station had about 236,000 followers at the time of the article. Prior to the news article, the survey had received 119 responses. This reflected an approximate response rate of .008% of the 15,000 followers of the police department. Within 24 hours of the news article being published the survey had received an additional 116 responses. As stated in Chapter 3, for a small effect size (f) of .02, the sample size needed to reach 395 participants. On July 25, 2023, at approximately 9:41 a.m. PST, 17 days after the survey opened, the 395th response was collected. The survey instrument remained open for responses through July 31, 2023, at which time the instrument closed, and further responses were refused. At that time, the instrument had collected a total of 424 responses, which reflected a response

rate of .028% of the 15,000 followers of the police department, and less than .001% of the 236,000 followers of the news station. Due to the anonymous nature of the survey, it was impossible to discern an accurate response rate as lacking absolute knowledge of which population group, the police department or the news station, or both, the respondent belonged to.

Data Cleaning and Recoding

A total of 424 survey responses were received during the period of data collection outlined above. While some responses had an occasional missing segment of data regarding gender, age, race, ethnicity, etc., all submissions had complete responses regarding the dependent variables that served to answer the research questions regardless of the incomplete entries. For example, 11 respondents failed to include a gender selection, 23 failed to include a race selection, and 17 failed to select an ethnic group. However, all these subjects provided complete responses to the 24 dependent variables used to answer the three research questions. Therefore, no listwise deletion was conducted, and all survey responses gathered during the survey period were included in this study.

All survey responses were recorded online through Google Forms, where the survey was administered. Upon conclusion of the survey, the data were exported into a Microsoft Excel file for storage per Walden University guidelines. The data were then imported into SPSS for analysis. The first 24 questions of the survey instrument were used to populate data into three separate scales, as previously outlined in Chapter 3. Each scale contained eight questions that used an 11-point Likert scale system (0 = least

favorable, 5 = neutral, 10 = most favorable). Variables were then created for each question using the same scoring manner.

The first 24 questions in the survey contained 12 reverse-coded questions to maximize answer integrity. These questions were structured in such a way that 0 would represent the most favorable response and 10 would represent the least favorable response. Once collected, SPSS was used to recode these variables to align the most favorable response with the highest value (10).

Questions 1–8 of the survey formed an additive scale used to measure the perception of appearance of both clean-shaven and bearded officers. For clarity, terms such as *reasonable*, *compassionate*, *understanding*, and *professional* were used to acquire a measurement between 0 and 10. These eight questions formed the appearance scale described in Chapter 3 and were used to answer RQ1. Questions 9–16 of the survey formed an additive scale used to measure the perceived likely behaviors of both clean-shaven and bearded officers. In these questions, the respondent was asked to assume (from 0–10) the likelihood the officer would display certain behaviors associated with terms such as *use excessive force*, *be corrupt*, *abuse authority*, and *lie*. These eight questions formed the behaviors scale described in Chapter 3 and were used to answer RQ2. Questions 17–24 of the survey formed an additive scale used to measure the respondent's feelings generated when viewing the pictures of both clean-shaven and bearded officers. In these questions, the respondent reported on a scale of 0–10 their feelings in terms of *anxiety*, *hostility*, *compliance*, and *trusting*. These eight questions formed the feelings scale described in Chapter 3 and were used to answer RQ3. Together,

these 24 questions constructed the dependent variables gathered from the survey instrument.

The remaining 13 questions of the survey instrument collected sociodemographic, historical, and potential bias characteristic control variable questions. Combined, these data were used as the independent variables throughout this study. Variables were then created within SPSS for each of these questions. Age was the only continuous variable, and all other variables were either structured as binary or converted to binary as required.

Descriptive Statistics and Sociodemographic Characteristics

Descriptive statistics were gathered though SPSS to summarize the totality of data collected from the survey instrument. As such, the descriptive statistics can be used to reveal generalized characteristics of the data set. Descriptive statistics for the 13 independent variables are presented in Table 1 and the 24 dependent variables are presented in Table 2. The descriptive statistics include the variable name, the description, the number of responses, the percentage, the minimum and maximum values, the mean, and the standard deviation for each. Of note, the median age of the data set was 50.0, for analysis the mean age (49.7) is reported in Table 1.

Table 1

Independent Variables (N = 424)

Variable	Description	*n*	%	Range	M	*SD*
AGE	Respondent's age (in years) Median = 50.0	415	97.80	18-82	49.7	15.36
DEG	Did respondent have college degree?	422	99.50	0-1	0.46	0.50
	0=No	226	53.60			
	1=Yes	196	46.40			
ETH	Was the respondent Non-Hispanic?	407	95.99	0-1	0.92	0.27
	0=No	32	7.90			
	1=Yes	375	92.10			
GEN	Was the respondent female?	413	97.40	0-1	0.61	0.49
	0=No	162	39.20			
	1=Yes	251	60.80			
INC	Was the respondent's annual income above average?	417	98.34	0-1	0.48	0.50
	0=No	216	51.80			
	1=Yes	201	48.20			
RAC	Was the respondent white?	401	94.57	0-1	0.88	0.33
	0=No	50	12.50			
	1=Yes	351	87.50			
ARR	Has the respondent ever been arrested?	423	99.80	0-1	0.28	0.45
	0=No	305	72.10			
	1=Yes	118	27.90			
HLP	Has the respondent ever called the police for help?	423	99.80	0-1	0.85	0.36
	0=No	63	14.90			
	1=Yes	360	85.10			
TIC	Has the respondent ever received a traffic ticket?	424	100.00	0-1	0.84	0.37
	0=No	67	15.80			
	1=Yes	357	84.20			
VIC	Has the respondent ever been a victim a crime?	421	99.29	0-1	0.77	0.42
	0=No	96	22.80			
	1=Yes	325	77.20			
LEO	Is the respondent, or the respondent's immediate family, a member of law enforcement?	424	100.00	0-1	0.32	0.47
	0=No	289	68.20			
	1=Yes	135	31.80			
LKB	Does the respondent like beards?	404	95.30	0-1	0.75	0.44
	0=No	103	25.50			
	1=Yes	301	74.50			
WRB	Does the respondent wear a beard?	422	99.50	0-1	0.37	0.68
	0=No	315	74.60			
	1=Yes	107	25.40			

Table 2

Dependent Variables (N = 424)

Variable	Description	*n*	%	Range	M	*SD*
COM1	How compassionate the clean-shaven officer appears. (0 = Not compassionate, 10 = compassionate)	424	100.00	0-10	5.25	2.63
COM2	How compassionate the bearded officer appears. (0 = Not compassionate, 10 = compassionate)	424	100.00	0-10	5.57	2.64
PRO1	How professional the clean-shaven officer appears. (0 = Not professional, 10 = Professional)	424	100.00	0-10	6.90	2.59
PRO2	How professional the bearded officer appears. (0 = Not professional, 10 = Professional)	424	100.00	0-10	7.00	2.65
REA1	How reasonable the clean-shaven officer appears. (0 = Not reasonable, 10 = Reasonable)	424	100.00	0-10	6.26	2.56
REA2	How reasonable the bearded officer appears. (0 = Not reasonable, 10 = Reasonable)	424	100.00	0-10	6.85	2.51
UND1	How understanding the clean-shaven officer appears. (0 = Not understanding, 10 = Understanding)	424	100.00	0-10	5.14	2.77
UND2	How understanding the bearded officer appears. (0 = Not understanding, 10 = Understanding)	424	100.00	0-10	5.36	2.7
ABU1	How likely the clean-shaven officer is to refrain from abusing authority (0 = Not likely, 10 = Likely)	424	100.00	0-10	5.58	3.13
ABU2	How likely the bearded officer is to refrain from abusing authority (0 = Not likely, 10 = Likely)	424	100.00	0-10	5.83	2.98
FOR1	How likely the clean-shaven officer is to avoid using excessive force (0 = Not likely, 10 = Likely)	424	100.00	0-10	6.12	2.88
FOR2	How likely the bearded officer is to avoid using excessive force (0 = Not likely, 10 = Likely)	424	100.00	0-10	6.19	2.76
HON1	How likely the clean-shaven officer is to be honest. (0 = Not likely, 10 = Likely)	424	100.00	0-10	6.23	2.83
HON2	How likely the bearded officer is to be honest. (0 = Not likely, 10 = Likely)	424	100.00	0-10	6.23	2.90
TRU1	How likely the clean-shaven officer is to tell the truth in court. (0 = Not likely, 10 = Likely)	424	100.00	0-10	6.23	3.06
TRU2	How likely the bearded officer is to tell the truth in court. (0 = Not likely, 10 = Likely)	424	100.00	0-10	6.41	3.02
CLM1	How calm the clean-shaven officer makes respondent feel. (0 = Not calm, 10 = Calm)	424	100.00	0-10	6.83	3.20
CLM2	How calm the bearded officer makes respondent feel. (0 = Not calm, 10 = Calm)	424	100.00	0-10	7.07	3.05
CPL1	How compliant the respondent feels with the clean-shaven officer (0 = Not compliant, 10 = Compliant)	424	100.00	0-10	8.05	2.69
CPL2	How compliant the respondent feels with the bearded officer. (0 = Not compliant, 10 = Compliant)	424	100.00	0-10	7.90	2.88
PCF1	How peaceful the respondent feels toward the clean-shaven officer (0 = Not peaceful, 10 = Peaceful)	424	100.00	0-10	7.90	2.73
PCF2	How peaceful the respondent feels toward the bearded officer. (0 = Not peaceful, 10 = Peaceful)	424	100.00	0-10	7.95	2.73
TRS1	How trusting the respondent feels toward the clean-shaven officer (0 = Not trusting, 10 = Trusting)	424	100.00	0-10	6.57	3.22
TRS2	How trusting the respondent feels toward the bearded officer. (0 = Not trusting, 10 = Trusting)	424	100.00	0-10	6.79	3.18

In addition to the variables above, composite variables were created from the dependent variable data to allow further analysis. These variables were grouped together by the root of the questions, such as appearance, likely behaviors, and respondent's feelings, then divided into appropriate categories of clean-shaven or bearded. These variables either provided the sum of the ratings for the variable or provided the difference between the respective variables as further noted in Table 3. Descriptive statistics were then gathered though SPSS to summarize the totality of data presented through the creation of these variables. Descriptive statistics for these variables are presented in Table 3 and can be used to reveal generalized characteristics of the data. The descriptive statistics include the variable name, the description, the number of responses, the percentage, the minimum and maximum values, the mean, and the standard deviation for each.

Table 3

Composite Variable List (N = 424)

Variable	Description	n	%	Range	M	SD
APP1	Sum of all appearance of the clean-shaven officer variables. (COM1+PRO1+REA1+UND1)	424	100.00	0-40	23.55	9.14
APP2	Sum of all appearance of the bearded officer variables. (COM2+PRO2+REA2+UND2)	424	100.00	0-40	24.77	9.03
BEH1	Sum of all likely behaviors of the clean-shaven officer variables. (ABU1+FOR1+HON1+TRU1)	424	100.00	0-40	24.16	10.59
BEH2	Sum of all likely behaviors of the bearded officer variables. (ABU2+FOR2+HON2+TRU2)	424	100.00	0-40	24.65	10.32
FEL1	Sum of all subject's feelings when viewing clean-shaven officer variables. (CLM1+CPL1+PCF1+TRS1)	424	100.00	0-40	29.36	9.10
FEL2	Sum of all subject's feelings when viewing bearded officer variables. (CLM2+CPL2+PCF2+TRS2)	424	100.00	0-40	29.71	9.23
TOT1	Sum of all clean-shaven officer variables. (ABU1+CLM1+COM1+CPL1+FOR1+HON1 +PCF1+PRO1+REA1+TRS1+TRU1+UND1)	424	100.00	0-120	77.06	25.36
TOT2	Sum of all bearded officer variables. (ABU2+CLM2+COM2+CPL2+FOR2+HON2 +PCF2+PRO2+REA2+TRS2+TRU2+UND2)	424	100.00	0-120	79.14	25.18
DAPP	Difference of bearded and clean-shaven appearance variables. (APP2-APP1)	424	100.00	-24-27	1.22	3.86
DBEH	Difference of bearded and clean-shaven behavior variables. (BEH2-BEH1)	424	100.00	-27-32	0.50	4.01
DFEL	Difference of bearded and clean-shaven feelings variables. (FEL2-FEL1)	424	100.00	-29-26	0.36	4.61
DTOT	Difference of bearded and clean-shaven total variables. (TOT2-TOT1)	424	100.00	-80-76	2.08	10.18

Subject Sociodemographic

Table 1 summarized subject demographics for the sample (n = 424). Subjects ranged in age from 18-82 years old, with 50 being the median age. Within the sample, 46% of the subjects reported having a college degree; 92% reported being non-Hispanic;

39% identified as male and 61% identified as female; 48% reported an above average annual income; and 88% reported being white. All subjects were required to reside, work, or be otherwise connected to the county in order to participate in the survey and agreed to the truthfulness of this premise through acknowledgement of the consent form completed prior to beginning the survey.

When compared to the sociodemographic of the county, similarities indicated the sample to have characteristics that approximates the population of the county and allows for generalizations. Similarities between respondent demographics and the county census bureau demographics include gender, reported above to be 61% female among the respondent population and 50% among the county demographics; ethnicity, wherein 92% of respondents reported to be non-Hispanic versus 89% among the county; and race, where 88% of respondents reported being white compared to 86% reported within the county residents. A near similarity was observed among the mean age reported of 50 years from survey respondents compared to 42 years of county residents. This slight difference in the mean age between the two may be caused by the minimum age of 18 required for entry into the survey population whereas the county demographics have no minimum age requirement for inclusion in the population. The similarities among gender, race, ethnicity, and age, indicate the survey sample is appropriately representative of the population of the county.

Subject History

In addition, Table 3 shows significant history of the subject that may have impacted responses of the survey. Accordingly, 28% reported having been arrested; 85%

had called the police for help; 84% had received a traffic ticket; and 77% reported having been the victim of a crime. These responses were sought to determine what type of contact the subjects may have had with law enforcement.

Subject Bias

Last, Table 3 identifies factors about the subject that may have biased the responses of the survey. Accordingly, 32% reported being a member of law enforcement, or having an immediate family member in the profession; 75% reported they liked beards; and 25% reported that they wear a beard.

Results

Recall that this quantitative study served to answer the single foundational question: Does a beard on a uniformed officer impact the public's perception of that officer? To appropriately measure differences between clean-shaven and bearded officers, respondents answered a series of questions with eight questions specifically focused on the respective research question. The answers were gathered into the previously mentioned corresponding scales, further described below. Additional observations were made through the examination of control variables that included demographic characteristics.

Bivariate Results

Research Question 1

The first research question was answered through analysis of responses to questions 1-8 in the survey instrument, which comprised the appearance scale. The following four questions were asked regarding the appearance of an officer that was

clean-shaven, and the same four questions were asked regarding the same officer that was bearded:

How compassionate does this officer appear?

How professional does this officer appear?

How reasonable does this officer appear?

How understanding does this officer appear?

All questions utilized a 0-10 Likert scale where 0 = least favorable response, 5 = neutral response, and 10 = most favorable response. The scores among the 424 respondents were tallied and computed into a composite variable for further analysis. The composite variable of all appearance-based clean-shaven officer answers was constructed as APP1. The composite variable of all appearance-based bearded officer answers was constructed as APP2. The mean of the APP1 was 23.55 and the mean of APP2 was 24.77 which presented a mean difference of 1.22. This indicated respondents reported the bearded officer to appear more compassionate, more professional, more reasonable, more understanding than the clean-shaven officer. Utilizing a paired sample t-test of APP1 and APP2 revealed a statistically significant difference ($p<.001$) between the mean of the two variables (see Table 4). Therefore, the null hypotheses must be rejected.

Paired-sample t-tests were also conducted between the associated variables found in the appearance scale. The values of all paired sample t-tests are reported in Table 4. Apart from the paired samples t-test between PRO2 and PRO1, all returned a statistically significant differences, which indicated that respondents evaluated the bearded officers as being more compassionate, reasonable, and understanding as compared to the clean-

shaven officers. The greatest difference was observed in the responses of reasonableness (M=.594, p<.001), followed by compassionate (M=.314, p<.001), and understanding (M=.217, p<.01). These results further support the rejection of the null hypotheses.

Table 4

Paired Sample T-Test Results within the Appearance Scale

Paired samples	M_{diff}	SD	t	df
Sum (APP2 - APP1)	1.224***	3.862	6.527	423
Compassionate (COM2 - COM1)	0.314***	1.608	4.018	423
Professional (PRO2 - PRO1)	0.099	1.769	1.153	423
Reasonable (REA2 - REA1)	0.594***	1.708	7.165	423
Understanding (UND2 - UND1)	0.217**	1.353	3.303	423

Note. *$p < .05$, **$p < .01$, ***$p < .001$

Research Question 2

The second research question was answered through analysis of responses to Questions 9-16 in the survey instrument and comprised the behaviors scale. The following four questions were asked regarding the likely behaviors of an officer that was clean-shaven, and the same four questions were asked regarding the same officer that was bearded:

How likely is this officer to avoid using excessive force?

How likely is this officer to be honest?

How likely is this officer to refrain from abusing his authority?

How likely is this officer to tell the truth in court?

These variables were among those that were reverse coded as previously described. For further analysis, these variables were recoded to align with 0 = least likely behavior and 10 = most likely behavior. The scores among the 424 respondents were

tallied and computed into a composite variable for further analysis. The composite variable of all likely behavior-based clean-shaven officer answers was constructed as BEH1. The composite variable of all likely behavior-based bearded officer answers was constructed as BEH2. The mean of BEH1 was 24.155 and the mean of BEH2 was 24.653 which presented a mean difference of 0.498. This indicated respondents reported the bearded officer to appear more likely to refrain from abusing their authority, more likely to avoid using excessive force, more likely to be honest, and more likely to tell the truth than the clean-shaven officer. Utilizing a paired-sample t-test of BEH1 and BEH2 revealed a statistically significant difference ($p < .05$) between the two variables (see Table 5). Therefore, the null hypotheses must be rejected.

Paired sample t-tests were also conducted between all associated variables found within the behaviors scale. The values of all paired sample t-tests are reported in Table 5. Of these tests, two paired samples ABU2 - ABU1 and TRU2 - TRU1 returned noted statistically significant differences, which indicated that respondents evaluated the bearded officers as being less likely to abuse their authority and more likely to tell the truth in court as compared to the clean-shaven officers. The greatest difference was observed in the responses of less likely to abuse authority ($M = 0.248$, $p < .001$) followed by likely to tell the truth in court ($M = .179$, $p < .05$). These findings further reinforce the rejection of the null hypotheses.

Table 5

Paired Sample T-Test Results Within the Behaviors Scale

Paired samples	M_{diff}	SD	T	df
Sum (BEH2 - BEH1)	-0.498*	4.005	2.559	423
Abuse Authority (ABU2 - ABU1)	-0.248***	1.459	3.494	423
Excessive Force (FOR2 - FOR1)	-0.073	1.892	0.796	423
Honest (HON2 - HON1)	-0.002	1.566	-0.031	423
Tell Truth (TRU2 - TRU1)	-0.179*	1.536	2.402	423

Note. *$p < .05$, **$p < .01$, ***$p < .001$

Research Question 3

The last research question was answered through analysis of responses to Questions 17-24 in the survey instrument, which comprised the feelings scale. The following four questions were asked regarding the respondent's feelings when presented with an officer that was clean-shaven, and the same four questions were asked regarding the same officer that was bearded:

How anxious does this officer make you feel?

How hostile do you feel toward this officer?

How compliant would you feel toward this officer?

How trusting would you feel with this officer?

Two of these variables were among those that were reverse coded as previously described. For further analysis, the two variables were recoded so that all questions aligned appropriately whereas 0 = least favorable response, 5 = neutral response, and 10 = most favorable response. The scores among the 424 respondents were tallied and computed into a composite variable for further analysis. The composite variable of all respondent's feelings from a clean-shaven officer answers was constructed as FEL1. The

composite variable of all respondent's feelings from a bearded officer answers was constructed as FEL2. The mean of the FEL1 was 29.36 and the mean of FEL2 was 29.71 which presented a mean difference of 0.35. The results of a mean analysis of the paired samples indicated respondents reported the bearded officer to invoke greater feelings of calm, peacefulness, and trust toward the bearded officer than the clean-shaven officer. However, the results indicated respondents reported the clean-shaven officer to invoke greater feelings of compliance than that of the bearded officer. Utilizing a paired-sample t-test of FEL2 and FEL1 revealed a non-statistically significant difference ($p = .112$) between the two variables (see Table 6). Therefore, the null hypotheses must be accepted.

Paired sample t-tests were also conducted between all associated variables found within the feelings scale. The values of these tests are reported in Table 6. Of these tests, two paired samples CLM2-CLM1 and TRS2-TRS1 returned noted statistically significant differences which indicated that respondents felt calmer toward and more trusting of the bearded officers than compared to the clean-shaven officers. The greatest difference was observed in the responses of feeling calm ($M = 0.241$, $p < .05$) followed by feelings of trust ($M = .219$, $p < .05$). These findings further support the rejection of the null hypotheses.

Table 6

Paired Sample T-Test Results Within the Feelings Scale

Paired samples	M_{diff}	SD	t	df
Sum (FEL2 - FEL1)	-0.356	4.608	-1.591	423
Calm (CLM2 - CLM1)	-0.241*	2.295	-2.159	423
Compliance (CPL2 - CPL1)	-0.149	1.92	-1.593	423
Peaceful (PCF2 - PCF1)	-0.045	1.78	-0.518	423
Trusting (TRS2 - TRS1)	-0.219*	2.093	-2.158	423

Note. *$p < .05$, **$p < .01$, ***$p < .001$

Additional Analysis With Control Variables

To exhaustively analyze the data, additional statistical tests were conducted to determine the strength of relationships between variables. Although not specifically addressing the primary research questions, these tests were appropriate for inclusion in this study as they provided further data describing the impact sociodemographic variables, history variables, and bias variables had on the appearance scale, behaviors scale, and feelings scale.

Bivariate Correlations

The tables below display results of bivariate correlation analysis conducted between all independent variables and the composite dependent variables described earlier reported as appearance, likely behaviors, respondent's feelings, and the sum of the variables. Reported correlations assume a value between -1 (a negative relationship) and +1 (a positive relationship) and reflect the direction of the relationship between the measured variables. A reported value of 0 indicates no relationship. A negative relationship is found when the value of one variable increases and the value of the second variable decreases, while a positive relationship is found when the value of both variables

increase simultaneously. For example, in the data presented in Table 7, it is observed that the correlation coefficient between the subject's age and the composite total indicated a weak but statistically significant negative relationship ($r = -.27$, $p < .05$). This suggests that as the subject's age increases, the mean score of the composite total decreases, which can be loosely interpreted to suggest that the older the subject, the less favorable was the bearded officer, or that older generations preferred clean-shaven officers. Data can also infer the opposite relationship regarding age to infer the younger generation preferred the bearded officer. Both negative and positive relationships were identified within the data.

Table 7

Sociodemographic Variables Bivariate Correlations Matrix (N = 424)

	Age	Degree	Ethnicity	Gender	Income	Race
Appearance	-.221**	-.046	-.059	.027	-.039	.047*
Behaviors	-.248**	-.039	.077	.024	-.06	.113
Feelings	-.194**	-.015	.024	.024	-.031	.076
Total	-.270**	-.040	.019	.030	-.053	.096

Note. *$p < .05$, **$p < .01$

Further evaluation of the results reported in Table 7 indicated statistically significant correlations across all evaluations related to the age of the respondent. In addition, all the correlations regarding age reflected a negative relationship. The age/appearance correlation ($r = -.22$, $p < .01$), the age/behaviors correlation ($r = -.25$, $p < .01$), and the age/feelings correlation ($r = -.19$, $p < .01$) all indicate that across every measure, the age of the respondent played a statistically significant role in the public perception of the officer. In addition, due to all relationships regarding age were negatively aligned, the data further suggests that as the reported age of the respondent

increased, the overall value of the ratings decreased. This tends to verify the suggestion that the older generation of subjects viewed the clean-shaven officers more favorably.

The subject's race was the only other demographic identified in Table 7 that returned a statistically significant relationship to any of the dependent variables. However, race did not play a significant factor across all measures like the subject's age did. The subject's race only held a significant but weak positive relationship across the race/appearance spectrum ($r = .05$, $p < .05$), and not any other measure as the race/behavior analysis, the race/feelings analysis, and the race/total analysis all failed to return a relationship of statistical significance. This tends to suggest that whites had a more favorable opinion of the appearance of the bearded officer than that of the clean-shaven officer.

Among the survey, data was gathered that measured the respondent's contact with law enforcement. As such, questions were asked to determine and differentiate subjects that had voluntary contact with the police, such as being a victim of a crime or otherwise calling the police for help. In addition, questions were asked that identified subject's that had been non-voluntarily contacted by the police, such as those that received a traffic ticket or those that had been arrested. Table 8 summarizes bivariate correlations that measure these types of independent variables to the four composite dependent variables used to answer the research questions.

Table 8

History Variables Bivariate Correlations Matrix (N = 424)

	Victim	Help	Ticket	Arrested
Appearance	.004	-.036	.04	-.059
Behaviors	.009	.016	-.019	-.170***
Feelings	.016	.093	.008	-.128**
Total	.012	.034	.012	-.147**

Note. **$p < .01$, ***$p < .001$

As indicated in Table 8 and described above whereas reported analysis assumes a value between -1 (a negative relationship) and +1 (a positive relationship) and a reported value of 0 indicates no relationship, several of the results revealed little to no relationship at all. Analysis suggests that being a victim of a crime, calling the police for help, or receiving a traffic ticket all have little to no relationship with any of the dependent variables. The only data that indicated a relationship, although weak and negatively aligned, was found with the examination of respondents that reported an arrest in their past. As such, all analysis related to the history of an arrest indicated a weak negative relationship such as the arrested/appearance ($r = -.06$, $p = ns$), the arrested/behaviors, which was the strongest relationship among all tested but still a weak negative relationship according to all standards of strength ($r = -.17$, $p < .001$), the arrested/feelings, which was also a weak negative relationship ($r = -.13$, $p < .01$), and the arrested/total ($r = -.15$, $p < .01$), a weak negative relationship. These results indicate respondents who have been previously arrested rated the bearded officers lower in the behaviors scale and the feelings scale.

The final bivariate examinations were conducted to examine any potential bias of the respondent with regards to law enforcement and facial hair. Specifically, respondents were asked if they, or any member of their immediate family, were members of law enforcement, and if the respondent liked or wore a beard. These questions potentially had the ability to influence the responses of the subject and the results of the analysis are reported in Table 9.

Table 9

Bias Variables Bivariate Analysis Matrix (N = 424)

	Law enforcement	Like beard	Wear beard
Appearance	-.034	.097	-.031
Behaviors	-.072	.108*	-.012
Feelings	-.085	.136**	-.03
Total	-.08	.141**	-.021

Note. *$p < .05$, **$p < .01$

As indicated in Table 9, there is nearly no relationship between members of the law enforcement family and the responses to any of the dependent variables. Nor is there any meaningful relationship between those respondents that wear a beard and the responses to the dependent variables. The only statistically significant relationships, although weak, were found upon the examination of those subjects that indicated they liked beards. As such, the like beard/behavior analysis indicated a weak positive relationship ($r = .11$, $p < .05$), the like beard/feelings analysis indicated a weak negative relationship ($r = .14$, $p < .01$), and the like beard/total analysis indicated a weak positive relationship ($r = .14$, $p < .01$). These findings suggest that if the respondents liking of beards had a small influence on their ratings of the officers.

OLS Analysis and Results

Last, an ordinary least squares (OLS) regression analysis was conducted to further examine two remaining analytical questions. One, to determine if the relationships observed above are genuine, or if they are a product of another variable (or set of variables) that influences both the independent and dependent variables. Said another way, while controlling for other variables, does the original bivariate relationship remain? Two, to observe how much of the variation of the relationships can be explained by the appropriate set of independent variables. More simply stated, can the data be used to predict certain outcomes with any degree of certainty?

To ensure the accuracy of OLS regressions, an evaluation was needed to determine if two or more independent variables are correlated with each other, also known as multicollinearity. An acceptable test for multicollinearity is to generate and review Variance Influence Factors (VIF) between independent variables. This examination quantifies the VIF between the variables on a numeric scale. In general terms, a VIF above 5.0 is concerning, and a VIF above 10.0 is troublesome. VIFs were generated for all independent variables and the highest returned rating was below 2.1, therefore multicollinearity was not observed.

A total of four OLS regressions were conducted. The first OLS regression was conducted utilizing the difference in the cumulative data regarding clean-shaven and bearded officers. This allowed for a general assessment to determine if any independent variables (age, race, prior arrest, etc.) had an influence on the foundational question of there being a difference in the public perception about clean-shaven and bearded officers.

As displayed in Table 10, and also consistent with the analysis reported earlier, the results of multiple regression analysis revealed elements of the subject's sociodemographic, and history were significant predictors of the outcome variable. None of the potential bias variables, such as the subject wearing a beard, or being a member of law enforcement, had an influence on the dependent variables. Little variation, just 17%, in the dependent variable can be explained by the independent variables in this model ($R^2 = .172$, $p < .001$). Notably, the regression coefficients associated with the subject's age ($\beta = -.312$, $p < .001$), the subject's income ($\beta = -.155$, $p < .01$), the subject's race ($\beta = .104$, $p < .05$), the subject's history of receiving a traffic ticket ($\beta = .181$, $p < .01$) or being arrested ($\beta = -.233$, $p < .001$) were identified as significant predictors of the outcome.

Table 10

OLS Regression Predicting Influence of IVs on Overall Perception (N = 424)

	B	SE	β	T
(Constant)	-3.910	3.444		-1.135
Age	-0.214***	0.037	-0.312	-5.837
Degree	-0.163	1.126	-0.008	-0.145
Ethnicity	-1.935	2.107	-0.048	-0.919
Gender	-1.096	1.541	-0.051	-0.712
Income	-3.276**	1.167	-0.155	-2.806
Race	-3.223*	1.632	-0.104	-1.975
Victim of a crime	-1.010	1.345	-0.040	-0.751
Called police for help	-1.287	1.583	-0.043	-0.814
Received a ticket	-5.059**	1.504	-0.181	-3.365
Prior arrest	-5.476***	1.335	-0.233	-4.101
Law enforcement	-0.396	1.180	-0.017	-0.336
Like beard	-2.352	1.276	-0.097	-1.844
Wear beard	-0.363	1.760	-0.015	-0.207
R^2	-0.172			

Note. *$p < .05$, **$p < .01$, ***$p < .001$

Based on the reported beta values, age was the strongest variable (-.312[Weak]), followed by prior arrest (-.233[Weak]), then received a ticket (.181[Weak]). Using this analysis allows for a slight prediction in behavior among the negative relationships wherein as age or prior arrests increase the clean-shaven officer becomes more favored. It also allows for prediction of behavior among the positive relationship whereas when the value of the traffic ticket increased, so did the value of the bearded officer. Full results of the regression analysis, to include all independent variables, are displayed in Table 10.

The second OLS regression explored data relevant to RQ1. This regression analysis was conducted utilizing data reported within the differences in the appearance scale set as the dependent variables. This allowed for exploration to determine if any independent variables (age, race, prior arrest, etc.) had an influence on the appearance scale variables such as appearing compassionate, professional, reasonable, and understanding in both clean-shaven and bearded officers. As displayed in Table 11, and also consistent with the OLS regression above, the results of multiple regression analysis revealed elements of the subject's sociodemographic and history to be significant predictors of the outcome variable. None of the potential bias variables, such as the subject wearing a beard, or being a member of law enforcement, had an influence on the dependent variables. Like reported in the previous OLS regression found in Table 10, an even smaller variation, just 10%, in the dependent variable can be explained by the independent variables in this model ($R2 = .097$, $p < .001$). Among this OLS analysis, the regression coefficients associated with the subject's age ($\beta = -.246$, $p < .001$), and the

subject's history of receiving a traffic ticket (β = .174, p < .05) or being arrested (β = -.158, p < .05) were identified as significant predictors of the outcome.

Based on the reported beta values, age was again the strongest variable (-.246[Weak]), followed by received a ticket (.174[Weak]), then prior arrest (-.158[Weak]). Using this analysis allows for a slight prediction in behavior among the negative relationships wherein as age or prior arrests increase the clean-shaven officer becomes more favored. It also allows for prediction of behavior among the positive relationship whereas when the value of the traffic ticket increased, so did the value of the bearded officer. Full results of the regression analysis, to include all independent variables, are displayed in Table 11.

Table 11

OLS Regression Predicting Influence of IVs on Appearance (N = 424)

	b	SE	β	t
(Constant)	-2.789*	1.335		2.089
Age	-0.063***	0.014	-0.246	-4.421
Degree	-0.049	0.436	-0.006	-0.112
Ethnicity	-0.154	0.817	-0.010	-0.188
Gender	-0.171	0.597	-0.021	-0.287
Income	-0.790	0.453	-0.101	-1.746
Race	-0.781	0.632	-0.068	-1.235
Victim of a crime	-0.355	0.522	-0.038	-0.680
Called police for help	-0.253	0.613	-0.023	-0.412
Received a ticket	-1.807**	0.583	-0.174	-3.099
Prior arrest	-1.381**	0.518	-0.158	-2.668
Law enforcement	-0.011	0.457	-0.001	-0.024
Like beard	-0.436	0.495	-0.048	-0.881
Wear beard	-0.031	0.682	-0.003	-0.045
R^2	-0.097			

Note. *$p < .05$, **$p < .01$, ***$p < .001$

The third OLS regression explored data relevant to RQ2. This regression analysis was conducted utilizing data reported within the differences in the behaviors scale set as the dependent variables. This allowed for exploration to determine if any independent variables (age, race, prior arrest, etc.) had an influence on the behaviors scale variables such as refraining from abusing authority, avoiding the use of excessive force, being honest, and telling the truth in court for clean-shaven and bearded officers. As displayed in Table 12, and also consistent with previously reported analysis, the results of multiple regression analysis revealed elements of the subject's sociodemographic, and history were significant predictors of the outcome variable. None of the potential bias variables, such as the subject wearing a beard, or being a member of law enforcement, had an influence on the dependent variables. Like reported in the previous OLS regressions found above, a small variation, just 17%, in the dependent variable can be explained by the independent variables in this model ($R^2 = .171$, $p < .001$). Among this OLS analysis, the regression coefficients associated with the subject's age ($\beta = -.308$, $p < .001$), subject's ethnicity ($\beta = .104$, $p < .05$), subject's income ($\beta = -.174$, $p < .05$), subject's race ($\beta = .107$, $p < .05$), and the subject's history of receiving a traffic ticket ($\beta = .140$, $p < .05$) or being arrested ($\beta = -.240$, $p < .05$) were identified as significant predictors of the outcome.

Based on the reported beta values, age remained the strongest variable (-.308[Weak]), followed by prior arrest (-.240[Weak]), then received a ticket (.140[Weak]). Using this analysis allows for a slight prediction in behavior among the negative relationships wherein as age or prior arrests increase the clean-shaven officer

becomes more favored. It also allows for prediction of behavior among the positive relationship whereas when the value of the traffic ticket increased, so did the value of the bearded officer. This provides an interesting distinction between involuntary contact with the police such as receiving a traffic ticket and being arrested. Data gathered during this survey does not lend itself to explanation of this phenomenon but suggests that those arrested favored the clean-shaven officer while those that had a lesser involuntary contact, such as receiving a traffic ticket, tended to favor the bearded officer. Full results of the regression analysis, to include all independent variables, are displayed in Table 12.

Table 12

OLS Regression Predicting Influence of IVs on Officer Behaviors (N = 424)

	b	SE	β	t
(Constant)	-1.068	1.368		-0.781
Age	-0.084***	0.015	-0.308	-5.773
Degree	-0.054	0.447	-0.006	-0.122
Ethnicity	-1.653*	0.837	-0.104	-1.976
Gender	-0.624	0.612	-0.073	-1.020
Income	-1.464**	0.464	-0.174	-3.158
Race	-1.318*	0.648	-0.107	-2.033
Victim of a crime	-0.584	0.534	-0.058	-1.093
Called police for help	-0.411	0.628	-0.035	-0.654
Received a ticket	-1.546*	0.597	-0.140	-2.589
Prior arrest	-2.236***	0.530	-0.240	-4.217
Law enforcement	-0.138	0.469	-0.015	-0.294
Like beard	-0.628	0.507	-0.065	-1.239
Wear beard	-0.131	0.699	-0.014	-0.188
R^2	-0.171			

Note. *$p < .05$, **$p < .01$, ***$p < .001$

The fourth and final OLS regression explored data relevant to RQ3. This regression analysis was conducted utilizing data reported within the differences in the subject feelings scale set as the dependent variables. This allowed for exploration to

determine if any independent variables (age, race, prior arrest, etc.) had an influence on the subject feelings scale variables such as how calm the officer made the subject feel, how compliant the subject felt toward the officer, how peaceful the subject felt toward the officer, and how trusting the subject felt of the officer. As displayed in Table 13, and consistent with previously reported analysis, the results of multiple regression analysis revealed elements of the subject's demographics and history were significant predictors of the outcome variable. One of the potential bias variables, like beards ($\beta = .118$, $p < .05$), had an influence on the dependent variables. Like reported in the previous OLS regressions found above, a small variation, just 11%, in the dependent variable can be explained by the independent variables in this model ($R2 = .109$, $p < .001$). Among this OLS analysis, the regression coefficients associated with the subject's age ($\beta = -.219$, $p < .001$), and the subject's history of receiving a traffic ticket ($\beta = .137$, $p < .05$) or being arrested ($\beta = -.177$, $p < .05$) were identified as significant predictors of the outcome.

Based on the reported beta values, age remained the strongest variable (-.219[Weak]), followed by prior arrest (-.177[Weak]), then received a ticket (.137[Weak]) and like beards (.118[Weak]). A nearly significant relationship was observed within the income variable ($\beta = -.108$, $p = 0.06$) where the reported beta value indicated a weak relationship (-.11). Using this analysis allows for a slight prediction in behavior among the negative relationships wherein as age or prior arrests increase the clean-shaven officer becomes more favored. It also allows for prediction of behavior among the positive relationship whereas when the value of the traffic ticket increased, so did the value of the bearded officer. This analysis provided another statistically

significant distinction among the involuntary contact with the police. Again, as reported earlier, respondents that merely received a traffic ticket tended to favor the bearded officer, wherein those that reported a previous arrest favored the clean-shaven officer. Additional research is needed in this area to determine why this distinction exists and is further addressed in chapter 5. Full results of the regression analysis, to include all independent variables, are displayed in Table 13.

Table 13

OLS Regression Predicting Influence of IVs on Subject's Feelings (N = 424)

	B	SE	β	t
(Constant)	-0.052	-1.597		-0.033
Age	-0.067***	0.017	-0.219	-3.949
Degree	-0.158	0.522	-0.017	-0.302
Ethnicity	-0.436	0.977	-0.024	-0.446
Gender	-0.302	0.714	-0.031	-0.422
Income	-1.022	0.541	-0.108	-1.888
Race	-1.125	0.756	-0.081	-1.487
Victim of a crime	-0.072	0.624	-0.006	-0.115
Called police for help	-1.129	0.734	-0.085	-1.539
Received a ticket	-1.707*	0.697	-0.137	-2.448
Prior arrest	-1.859*	0.619	-0.177	-3.003
Law enforcement	-0.27	0.547	-0.027	-0.494
Like beard	-1.289*	0.592	-0.118	-2.179
Wear beard	-0.263	0.816	-0.024	-0.322
R^2	-0.109			

Note. *$p < .05$, **$p < .01$, ***$p < .001$

Summary

This study sought to answer a single significant question, *when a uniformed officer wears a beard, does the public's perception of that officer change*, through the analysis of three subordinate and related research questions. These research questions, framed in terms of appearance, likely behaviors, and respondent feelings, compared the

public responses to the questions asked with focus on the bearded and clean-shaven officers. Bivariate and multivariate analysis indicated a statistically significant difference between the facial hair of an officer and the perception of appearance as well as the facial hair of an officer and the likely behaviors of the officer. However, there was no significant difference between facial hair on an officer and the respondent's feelings toward the officer. The difference in means among the first two was statistically strong enough to effectively state that facial hair worn by an officer does in fact effect the public's perception of that officer, which effectively answers the guiding foundational question with an affirmative response. However, with the application of sociodemographic characteristics and controls, it was observed that not all bearded officers were favored more than the clean-shaven officers. Specifically, the older population and the population with a previous arrest tended to favor the clean-shaven officer more so than the bearded officer. The ultimate finding remains the same though, that facial hair, more specifically beards, worn by uniformed officers does impact the public's perception of those officers.

With these relationships realized, Chapter 5 provides an interpretation of these findings. Some limitations of the study are also addressed as well as recommendations for future research in this lane. Finally, implications the findings provide for positive social change are reviewed.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

Across the spectrum of leadership in law enforcement, military settings, and public or private sector, those in a position of leadership must use appropriate data to make sound decisions. According to Brynjolfsson and McElheran (2016), data-driven decision rates nearly tripled between 2005 and 2010. Their study on the use of data in decision making concluded that the use of data-driven decision making tended to be productivity enhancing. In law enforcement, the use of data to make decisions is not a new concept. For years now, departments have used crime analytics to determine heightened crime areas for enforcement within the problem-oriented policing model. In addition, departments have used traffic data such as speed or collision rates to determine appropriate areas for increased or decreased vehicle code enforcement operations. Several data-centric law enforcement systems routinely guide administrators and officers through decisions in the performance of their duties, and their use is commonplace and expected.

There is a division among uniformed officer dress and appearance standards across the country. Some departments have embraced a less militaristic appearance of their officers by allowing the visible display of tattoos and professionally groomed beards. Other departments have flatly refused to allow their officers this change with the noted exception of occasional participation in fundraising events, such as the popular No-Shave November in which officers can contribute to a donation towards child cancer research and be allowed to wear a beard in uniform during November.

Personal informal inquiries conducted within some departments in northern California revealed that among those departments that permanently amended their dress and appearance standards to include the wear of a professionally groomed beard, none of the decision makers consulted any data in their determination for the change. As noted by Bates et al. (2015), public perception of police influences the behavior of the public toward police. Administrators should consult data to decide to allow or forbid the wear of beards while in uniform. Numerous studies exist in which researchers examined factors that affect the public perception of police (Bates et al., 2015; Carmichael et al., 2021; Gleeson, 2018). Some of these studies suggest officers' appearances can alter the public's perception. Additionally, researchers have examined the impact beards have in non-law enforcement professions such as sales, customer service, and the medical profession (Kenny & Fletcher, 1973; Mason & Mason, 2017; Mital & Silvera, 2020). Nonetheless, no data were used or reviewed to make the decision about officers wearing a beard while in uniform. An exhaustive search of available sources revealed a potential answer to this question: no such data or research exists regarding whether beards worn by officers impact public perception.

The main objective of this study was to provide these data to administrators and officers alike. To do so, the primary focus was on the examination of relationships between a beard worn by a uniformed law enforcement officer and public perception of that officer. I sought to answer a single foundational question: Does a beard on a uniformed officer impact the public's perception about that officer? I also sought to quantify this answer. To do so, three areas of examination relative to perception were

developed, each with supporting and underlying questions to populate data into an appropriate and corresponding scale. First, I examined any effect beards (worn by police) have on public perception about appearance of the officer. Does a bearded officer appear more compassionate, professional, reasonable, or understanding than a clean-shaven officer? Next, I examined the relationship between beards on an officer and public perception about the likely behaviors of the officer. Does the bearded officer appear more or less likely to abuse authority, be corrupt, lie in court, or use excessive force than a clean-shaven officer? Finally, I examined the relationship between beards (worn by police) and individual feelings about the officer. Does the presence of a beard on an officer alter an individual's level of anxiety, amount of compliance, feelings of hostility, or feelings of trust differently than that of a clean-shaven officer? Answers to these questions are needed to better understand how a beard on an officer may impact the overall public perception about that officer.

I used a quantitative research design to answer these questions. Analysis identified statistically significant differences between public perception about officers with beards and public perception about clean-shaven officers. Descriptive quantitative research designs establish associations between variables (Labaree, 2009). Using a deductive approach in this study accomplished the goal of determining a correlation between the variables. The primary purpose of this study was to explore the relationship strength between perceptions about images of clean-shaven officers and perceptions about images of officers with a beard. Collected data involved subjective ratings of uniformed officers' appearance and corresponding perceptions in terms of compassion,

reasonableness, understanding, and professionalism. The study also involved subjective ratings of an officer's aptitude for certain behaviors in terms of abusing authority, being corrupt, lying in court, and using excessive force. Finally, data included subjective ratings regarding participants' individual feelings about an officer, in terms of anxiety, compliance, hostility, and trust. This combination of analysis provided information needed by law enforcement officers and administrators to make informed data-driven decisions about officers wearing beards in uniform.

Interpretation of the Findings

Univariate Findings

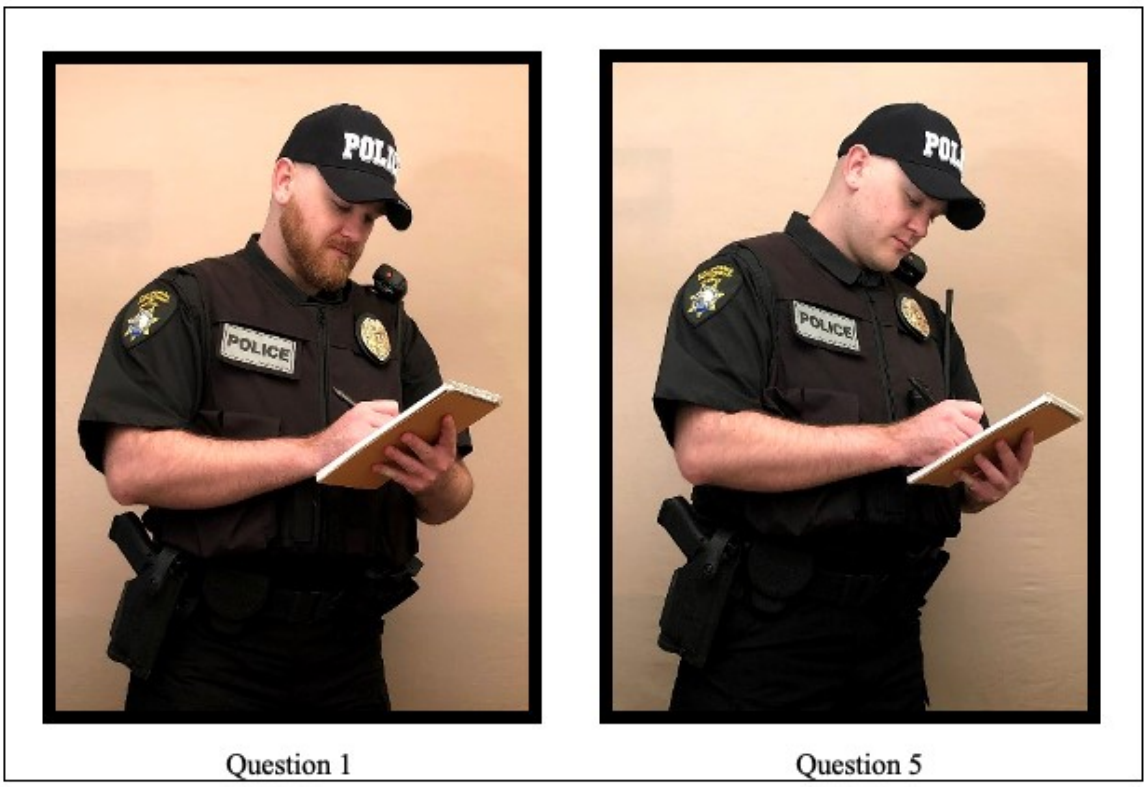
Composite variables were constructed that provide a mean rating of all 424 respondents spread across the 24 dependent variables. Simple descriptive statistics of this data indicated the mean across all 24 dependent variables for a bearded officer was 79.14 and for clean-shaven officers it was 77.06. This demonstrates that on the surface the bearded officer appeared to be more favorable than the clean-shaven officer. An examination of descriptive statistics one level deeper, within each scale, told a similar story. Composite variables were also constructed that provide a mean rating of each individual scale used in the study. As previously mentioned, the 24 dependent variables were categorized into three appropriate scales, each containing eight dependent variables. Descriptive statistics again provided generalized characteristics about these scales and the differences in means between the bearded and clean-shaven officers. In the appearance scale, descriptive statistics indicated the mean of the appearance variables for the bearded officer was 24.77, and the mean for the clean-shaven officer was 23.55. In the behaviors

scale, the mean of behavior variables for the bearded officer was 24.65, and the mean for the clean-shaven officer was 24.16. In the feelings scale, the mean of the feelings variables for the bearded officer was 29.71, and the mean for the clean-shaven officer was 29.36.

This generalized analysis at the univariate level indicates the bearded officer rated more favorably than the clean-shaven officer. In fact, as presented in Table 2, the mean score of the bearded officer was higher than the clean-shaven officer across 22 of the 24 dependent variables. The two exceptions were found among the honesty variable, where both bearded and clean-shaven officers returned a mean score of 6.23, and the compliance variable, where the bearded officer mean score was 7.90 and the clean-shaven officer mean score was 8.05. This represents the only dependent variable of the 24 in which the ratings about the clean-shaven officer returned a higher mean value than that of the bearded officer. The bearded officer and the clean-shaven officer were the same officer; the only difference between the two photos was the presence or lack of facial hair. These data alone begin to paint a picture regarding the impact a beard has on public perception about an officer. To further illustrate these findings, see Figure 2.

Figure 2

Survey Instrument Question 1 and 5 Photographs



Question 1 and Question 5 of the survey asked the respondent to rate on a scale of 0–10 the appearance of this officer in terms of professionalism: How professional does this officer appear? The mean of the variable from Question 1 was 7.00 while the mean of the variable from Question 5 was 6.90. This indicates that a beard on an officer can impact the public perception of that officer. This represents the major key finding of the study. However, determining if this finding is of statistical significance occurs if held true while controlling for certain variables.

Bivariate Findings

The next step of analysis was to determine if the differences in mean values were of statistical significance. To accomplish this task, a series of bivariate analysis was conducted. Paired sample t-test examinations revealed differences that were determined to be statistically significant. These examinations were conducted at the scale level wherein the sum of scores for the bearded officers comprised one value and the sum of scores for clean-shaven officers comprised another, in scales of appearance, behaviors, and feelings.

In the appearance scale, as noted in Table 4, the mean score for clean-shaven officers was 23.55 and the mean score for bearded officers was 24.77. A paired sample t-test was conducted between the two which indicated there was a statistically significant ($p < .001$) difference. These results allowed for the rejection of the null hypothesis for RQ1 and suggested that there is a significant difference between the perception of appearance regarding a bearded officer compared to a clean-shaven officer. The answer to this research question is one of the key findings of this project, that a beard worn by a uniformed officer has a statistically significant impact on the public's perception about the appearance of that officer.

In the behaviors scale, as noted in Table 5, the mean score for clean-shaven officers was 24.16 and the mean score for bearded officers was 24.65. A paired sample t-test was conducted between the two which indicated there was a statistically significant ($p < .05$) difference. These results allowed for the rejection of the null hypothesis for RQ2 and suggested that there is a significant difference between the perception of

behaviors regarding a bearded officer compared to a clean-shaven officer. This key finding presents significant data to administrators and officers by identifying statistically significant impact a beard on a uniformed officer has on the public's perception of that officer regarding potential behavior of the officer.

In the feelings scale, as noted in Table 6, the mean score for clean-shaven officers was 29.36 and the mean score for bearded officers was 29.71. A paired sample t-test revealed a non-statistically significant difference ($p = .112$) between the two variables. These results indicated the null hypothesis for RQ3 must be accepted which suggests that there is no significant difference between the feelings of the respondent regarding a bearded officer compared to a clean-shaven officer. Among all findings, this finding in answer to the research question may be the most significant. In summary, it states that regardless of the appearance of the officer, or the likely behaviors of the officer, the respondent reacts to either officer the same. There were no statistically significant differences noted between the bearded and clean-shaven officer.

Multivariate Findings

The final step of analysis was to ensure the findings above held true while controlling for independent variables. For this analysis, a series of OLS regressions were conducted. The first OLS regression was computed across the totality of all variables combined into a composite of clean shaven and a composite of bearded. This exam revealed elements of the subject's sociodemographic and history, but not bias, were significant predictors of the outcome variable. At this level of analysis, the subject's age, income, race, history of receiving a traffic ticket, and prior arrest were identified as

statistically significant predictors of the outcome. This led to additional analysis which included OLS regressions conducted at the scale level.

The regression analysis of the appearance scale, directly used to answer RQ1, indicated the subject's age, history of receiving a traffic ticket, and history of arrest, to be significant predictors of the outcome. Using this analysis allowed for prediction of behavior among the relationships wherein as age or prior arrests increase the clean-shaven officer becomes more favored. It also allows for prediction of behavior among the positive relationship whereas when the value of the traffic ticket increased, so did the value of the bearded officer. These can be loosely interpreted to indicate that the older generation favors the clean-shaven officer, as does those among the respondents that reported a prior arrest. Those with a history of traffic citations seemed to favor the bearded officer.

The regression analysis of the behaviors scale, used to answer RQ2, revealed far more predictive outcomes. In that analysis, the results indicated age, ethnicity, income, race, history of traffic tickets, and history of arrest all to have a statistically significant relationship with the predictive behaviors of the officer. This analysis allowed for a prediction in behavior among the negative relationships wherein as age or prior arrests increase the clean-shaven officer becomes more favored. It also allowed for prediction of behavior among the positive relationship whereas when the value of the traffic ticket increased, so did the value of the bearded officer. This provides an interesting distinction between involuntary contact with the police such as receiving a traffic ticket and being arrested. Data gathered during this survey does not lend itself to explanation of this

phenomenon but suggests that those arrested favored the clean-shaven officer while those that had a lesser involuntary contact, such as receiving a traffic ticket, tended to favor the bearded officer.

The regression analysis of the feelings scale, used for RQ3, revealed similar findings to that of the appearance scale in that age, history of receiving a traffic ticket, and history of an arrest revealed statistically significant relationships. The analysis allowed for prediction in behavior among the negative relationships wherein as age or prior arrests increase the clean-shaven officer becomes more favored. It also allows for prediction of behavior among the positive relationship whereas when the value of the traffic ticket increased, so did the value of the bearded officer. This analysis provided another statistically significant distinction among the involuntary contact with the police. Again, as reported earlier, respondents that merely received a traffic ticket tended to favor the bearded officer, wherein those that reported a previous arrest favored the clean-shaven officer.

The above findings extend existing knowledge regarding the impact facial hair has on the public perception about those that wear it. The presented data indicates an overall favoring of beards on officers, with the noted exceptions of prior arrests and the indication that increased age tended to favor the clean-shaven. This aligned with similar studies of facial hair within other professions such as the medical field, where facial hair was found to impact a patient's satisfaction level of treatment and care of their physician (Mason & Mason, 2017; Mun et al., 2019). It also aligns with the findings of Mittal and

Silvera (2020), whose study indicated that bearded salespersons were perceived as more trustworthy and held a higher level of expertise than those who were clean-shaven.

The data tends to oppose findings of Hellström and Tekle (1994), who determined those that wore facial hair were not as suited for positions of trust and integrity such as working in a bank, serving on a board, or within the court system. They found beard-wearers to be more suited toward a career in concert halls and laboratories. Unlike the bearded-officer study, where respondents favored the bearded officer over the clean-shaven officer regarding their potential to abuse their authority, use excessive force, lie, or be corrupt.

As fully explained in Chapter 2, most studies reported favorable, or at least negligible, evaluations of beard wearers. The data presented within this study aligns with previous studies in which respondents display a general attitude of acceptance of facial hair. Returning to the tenets of Sherif's social judgement theory, the data upholds the attitude of acceptance among the younger generation, and rejection among the older generation. Across all however, the general attitude of neutrality was observed when analyzing the feelings of the respondent when in the presence of a bearded or clean-shaven officer. The respondent's feelings were neutral, which is a key take-away from this research.

Administrators and officers can operationalize these interpretations by assuming the following results and acting accordingly:

Older generations favored the clean-shaven officer, while younger generations favored the bearded officer.

Whites favored the bearded officer, while non-White individuals favored the clean-shaven officer.

Individuals with a prior arrest favored the clean-shaven officer, while individuals with no prior arrest favored the bearded officer.

Individuals that had received a traffic ticket favored the bearded officer, while individuals that had not received a traffic ticket favored the clean-shaven officer.

The appearance of the officer, clean-shaven or bearded, had no statistically significant impact on the feelings of the subject.

Limitations of the Study

The method of recruitment, advertisement, and administration of this study severely limited not only the number of participants but was unintentionally selective of the respondents. Initially distributed through the Facebook page of a local police department, the survey only had potential to reach their followers which was reported at the time to be approximately 15,000. This is a small percentage of the population of the county. This was likely combatted when the news station produced an online article that included a link to the survey. Their followers numbered more than 236,000, which exceeded the population size of the county. Even so, among the respondent population existed a common denominator of having an existing personal Facebook account, which regardless of the viewership of the news station, is a select population within the group.

Even with the limitations described above, when compared to the sociodemographic of the county, similarities indicated the sample to have characteristics that approximates the population of the county and allows for inferences to the

population. This indicates that even though recruitment and participation was conducted through Facebook alone, that the respondents sociodemographic was varied enough within, yet similar enough to the county demographics, that the results were appropriately representative of the population.

The final noted limitation is that the quantitative data collected, no matter how interpreted, did not address the reasoning behind the phenomenon. By design, quantitative methodology did not capture the *why* regarding this social data. Qualitative data analysis would have been better suited for this understanding, and a qualitative follow-up study may produce findings of that nature. Suggestions of these types of study are made in the following section.

Recommendations

This is an under-researched area of study ripe for further exploration. Several recommendations for further study became apparent through the course of this project and are further outlined below. As mentioned earlier in chapter 2, not much research has been done regarding the public perception of the police. Any further research in this area would benefit the profession as well as add to the body of knowledge.

This study can be easily replicated in other areas. The target county sits in the northern portion of California. This study should be replicated nation-wide to determine if the views, differences, and relationships found in the county presented themselves in other areas of the country or the world. Even within California, the demographics are very different in Oakland, and southern California than in the target county and research

should be addressed to determine if the findings from this study hold true in other areas of the country.

This study also revealed some interesting distinctions regarding the subject's background that merit further exploration. For example, why do those with a previous arrest favor the clean-shaven officer, while those with only a traffic citation favor the bearded officer? Without offering speculation, the appropriate qualitative study could decide about this odd disparity. Both cases reflect an involuntary contact with law enforcement, but have different perceptions reported. Additionally, research should be conducted to explain why individuals that have voluntary contact with law enforcement perceive officers differently than those with involuntary contact? A qualitative study along these lines would be beneficial in combatting one of the limitations of this study, the understanding of why.

As outlined in Chapter 2, Thielgen et al. (2020) conducted a study that included the use of inmates that viewed photographs of four officers. The photographs depicted the same officer with either clear skin or digitally added tattoos, and the inmate was to rate each photo based on the officer's appearance. A similar study of the bearded officer should be replicated within the prison setting as well. Correctional officers across the country could benefit from the findings and administrators could similarly use the data to make an informed decision for their deputies.

Future research should be focused on additional factors about the law enforcement profession that have a potential impact on the perception of the citizens. Understanding what drives the public perception of the police is essential for law

enforcement personnel and administrators to grasp to begin repairs of the fractured relationship witnessed in the early 2020s. According to Bates et al. (2015), the attitudes and perceptions that the public has toward the police profoundly impact how the public feels about the police and the way the public behaves during police encounters.

Implications

Understanding what drives the public perception of the police is essential for law enforcement administrators and officers. This study provides empirical data for law enforcement to better understand the value of appearance as it relates to attitudes and perceptions. It is well-established that attitudes and perceptions strongly influence individual behavior (Dixson & Brooks, 2013; Kenny & Fletcher, 1973; Oldmeadow & Dixson, 2016), and those attitudes and perceptions profoundly impact how the public feels about the police which feeds the way the public behaves during police encounters (Bates et al., 2015). As revealed in the findings above, a beard worn by a uniformed officer has an impact on the way the public perceives that officer. This information, when presented appropriately to policymakers, may facilitate positive social change in three areas.

First, it provides administrators empirical data to review and consider when determining if their agency should allow the wear of facial hair while in uniform. Beyond a public opinion poll, this data provides statistically significant findings to help administrators understand that the public generally views the bearded officer as appearing more compassionate, professional, reasonable, and understanding than the clean-shaven officer. In short, their citizens have a greater level of respect toward the department that

embraces a change in the appearance standards and allows their officer to wear a beard. This has deep routed implications that can significantly alter the current path of police-public relationships and begin to course correct toward a restoration of the perception of the law enforcement career as being a noble profession grounded in honor. As previously mentioned, law enforcement administrators have attempted several remedies to restore this fractured relationship with little success. This small adjustment to appearance policy may further sway the public perception of the police for the better.

Second, this study provides data to the individual officer. Officers that serve in departments in which the dress and appearance policy has already authorized the wear of a beard while in uniform. It arms the officer with empirical data that serves to inform the officer of the way the public perceives the individual officer. It also illustrates that a minute detail, like wearing a beard or not, is noticed by the public and significantly alters the perception about the officer. At the officer level of understanding, consider a hypothetical scenario in which two officers (one clean-shaven and one bearded) respond to a domestic dispute among a couple in their 20s. Upon arrival to the scene, with all other skills and experiences between the two officers equal, the officers may consider the findings of this study in their approach to the situation. Should the clean-shaven officer make initial contact with the subjects? The data presented above indicates that based on the age demographic, the bearded officer has a greater success in establishing trust from the subjects. Realizing there are far more factors to consider, given the input that all other factors are equivalent, the officers may consider initial contact to be accomplished by the

bearded officer. The rapid and peaceful resolution of any volatile situation by the police is a goal that benefits all parties involved.

Third, should this study be used in any determination of dress and appearance of the officer, either by administrators or the individual officer, the public ultimately benefits. Positive social change may occur through the initiation of restoration of the police-public relationship. According to the data presented, the bearded officer is favored in 22 of the 24 measures. If departments adopted facial hair as policy, or at a minimum allowed their officers to wear it, then it follows that officers may begin to wear beards, and the public may then begin to hold those officers in higher regard than they presently do among clean-shaven officers.

At a minimum, the published findings of this study serve as a potential to aid in restoration between police and the citizens they serve. When used appropriately, the data and analysis provided by this study may foster a cultural shift among law enforcement that aids in relational restoration.

Conclusion

Within the studied county in northern California, and indeed across the country, many law enforcement agencies have recently allowed their uniformed officers to wear beards. Understanding the impact beards have on public perception of the officers with beards was worthy of exploration. The findings of this study provide data to law enforcement administrators for consideration in their decision to either allow beards or forbid them for their uniformed officers. It also provides unbiased answers to the individual officer that struggles with the decision to wear a beard or not. This study

explored if wearing a beard alters an officer's ability to resolve a situation peacefully, among other phenomena, by determining if a level of hostility toward the officer is related to the presence or absence of a beard on the officer. By exploring any impact beards have on the public perception of the police and the subsequent publication of the findings of this study, officers may better understand the benefits or detriments of wearing a beard while in uniform.

This study fills a void in this under-researched area and contributes to the body of knowledge through the examination of any relationship that beards worn by police have on the public perception of the police. Quantitative analysis of data gathered with the survey instrument indicate a statistically significant difference in the public perception between the two types of officers. In addition, the identified predictor variables, such as age, race, and previous arrests, allow for the prediction with a degree of certainty of how an individual's perception of the police may or may not change with the presence or absence of a beard.

A growing level of dissatisfaction with the police have led to some communities calling to defund local departments. It has put other community at a near boiling point whereas any perceived wrongdoing of police leads to violent protests of their presence. Law enforcement administrators continue to seek tools that can begin to restore this fractured relationship. Understanding what aspects of the police, including physical characteristics and appearance, may have in strengthening or damaging their relationship with the community is a fundamental and critical step towards restoration.

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Appendix A: Survey Instrument

Public Perception of the Police

I am a doctoral candidate at Walden University. I am inviting you to participate in a research study. Involvement in the study is voluntary, so you may choose to participate or not. Please feel free to direct any questions that you may have about the research to me at the attached email address; I will be happy to explain anything in greater detail.

I am interested in learning more about the public's perception of the police. In this survey, you will be asked to evaluate a photo of an officer and then answer a question. There are 24 of these questions with photos and then some questions that capture particular demographics from you. Please complete all sections of this survey and only take the survey one time. The survey should take less than 10 minutes of your time. All information gathered will be kept anonymous and confidential and no personal identifying information is sought. Your name is not collected and therefor won't appear anywhere. In addition, no one except me will know about your specific answers.

The benefit of this research is that you will be helping us to better understand the public's perception of the police. This information will in-turn help law enforcement better understand the views of the citizens they serve. There are no identified risks to you for participating in this study. If you do not wish to continue, simply close this browser. If you do wish to participate, you have the right to withdraw from the study, by simply closing your browser, at any time.

If you choose to voluntarily participate in this research project, simply select the "I agree" box below and continue.

Thank you for your participation.

** Indicates a required response.*

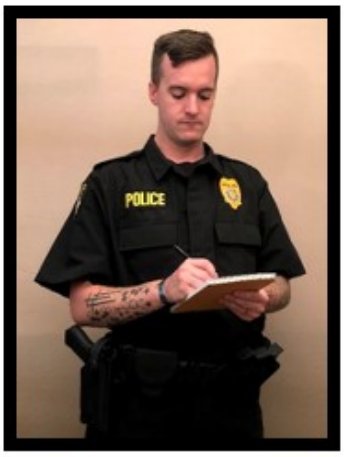
☐ I agree * [note: participant must check "I agree" to proceed to the survey]

Section 1. Please look at each photo below and then give us your impression of the officer. Since these are your personal opinions, there are no right or wrong answers.

1. How **reasonable** is this officer? (0=not at all, 5=neutral, 10=very)

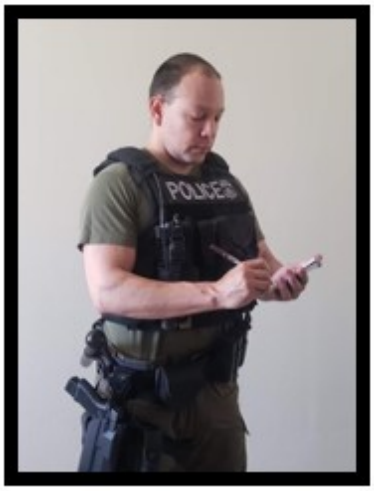
0 1 2 3 4 5 6 7 8 9 10

2. How **compassionate** is this officer? (0=not at all, 5=neutral, 10=very)



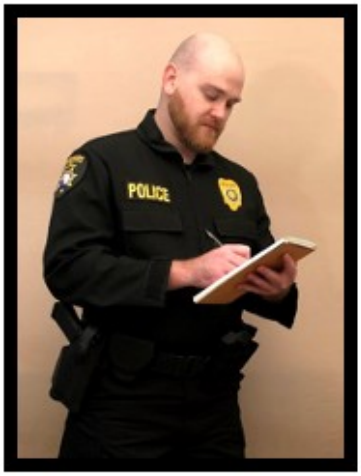
0 1 2 3 4 5 6 7 8 9 10

3. How **understanding** is this officer? (0=not at all, 5=neutral, 10=very)



0 1 2 3 4 5 6 7 8 9 10

4. How **professional** is this officer? (0=not at all, 5=neutral, 10=very)

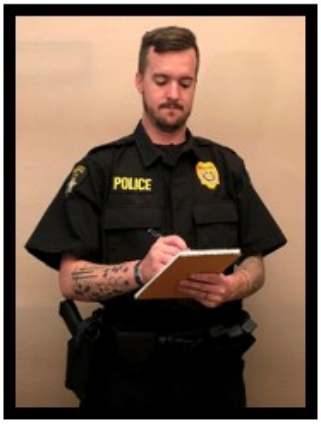


0 1 2 3 4 5 6 7 8 9 10

5. How **reasonable** is this officer? (0=not at all, 5=neutral, 10=very)

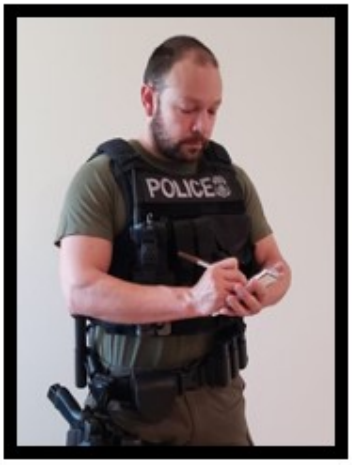
0 1 2 3 4 5 6 7 8 9 10

6. How **compassionate** is this officer? (0=not at all, 5=neutral, 10=very)



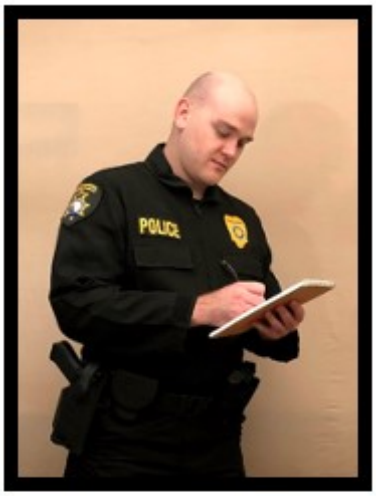
0 1 2 3 4 5 6 7 8 9 10

7. How **understanding** is this officer? (0=not at all, 5=neutral, 10=very)



0 1 2 3 4 5 6 7 8 9 10

8. How **professional** is this officer? (0=not at all, 5=neutral, 10=very)



0 1 2 3 4 5 6 7 8 9 10

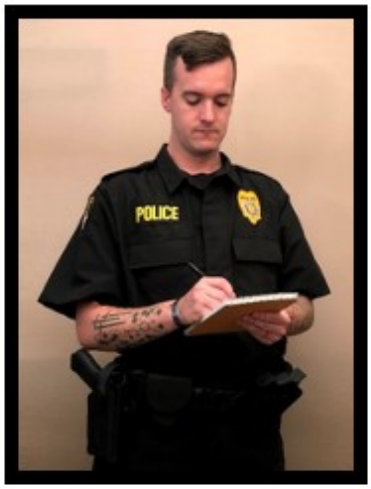
Section 2. Based on your impression of the officer in each photo, what is the likelihood this officer would engage in the type of action emphasized for each question? Again, since these are personal opinions, there are no right or wrong answers.

9. How likely is this officer to use **excessive force**? (0=not at all, 5=neutral, 10=very)

0 1 2 3 4 5 6 7 8 9 10

○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

10. How likely is this officer to **be corrupt**? (0=not at all, 5=neutral, 10=very)

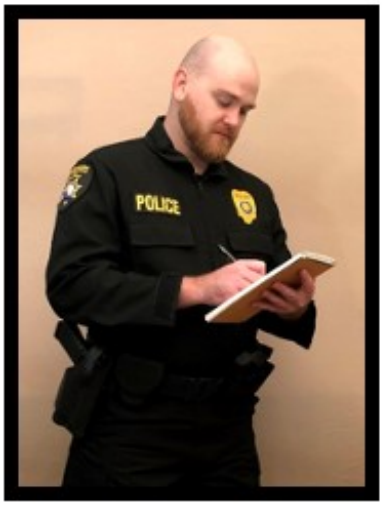


0 1 2 3 4 5 6 7 8 9 10

11. How likely is this officer to **abuse his authority**? (0=not at all, 5=neutral, 10=very)

0 1 2 3 4 5 6 7 8 9 10

12. How likely is this officer to **lie in court**? (0=not at all, 5=neutral, 10=very)

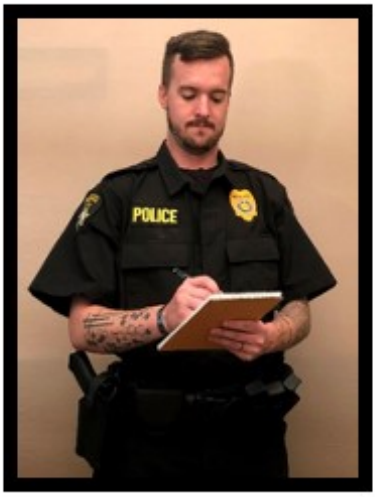


0 1 2 3 4 5 6 7 8 9 10

13. How likely is this officer to use **excessive force**? (0=not at all, 5=neutral, 10=very)

0 1 2 3 4 5 6 7 8 9 10

14. How likely is this officer to **be corrupt**? (0=not at all, 5=neutral, 10=very

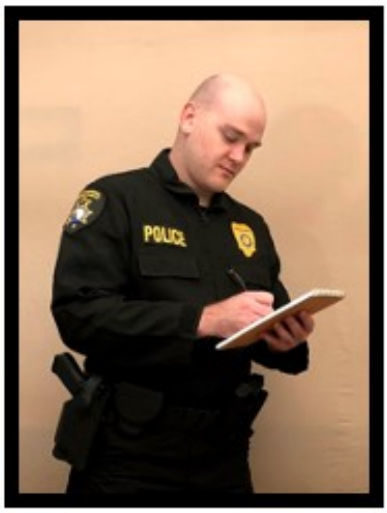


0 1 2 3 4 5 6 7 8 9 10

15. How likely is this officer to **abuse his authority**? (0=not at all, 5=neutral, 10=very)

0 1 2 3 4 5 6 7 8 9 10

16. How likely is this officer to **lie in court**? (0=not at all, 5=neutral, 10=very)



0 1 2 3 4 5 6 7 8 9 10

○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

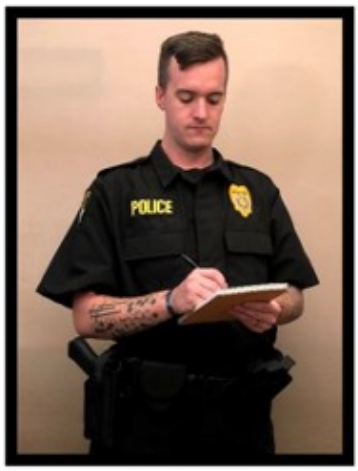
Section 3. These questions help us understand how you would feel if you were pulled over by a particular officer depicted in the photo. After looking at each photo, rate how you might feel. Since these are your own personal opinions, there are no right or wrong answers.

17. How **anxious** would this officer make you feel? (0=not at all, 5=neutral, 10=very)

0 1 2 3 4 5 6 7 8 9 10

○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

18. How **hostile** would you feel toward this officer? (0=not at all, 5=neutral, 10=very)

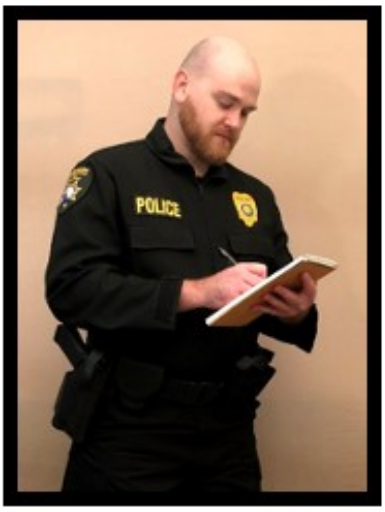


0 1 2 3 4 5 6 7 8 9 10

19. How **compliant** would you be with this officer? (0=not at all, 5=neutral, 10=very)

0 1 2 3 4 5 6 7 8 9 10

20. How **trusting** would you feel with this officer? (0=not at all, 5=neutral, 10=very)

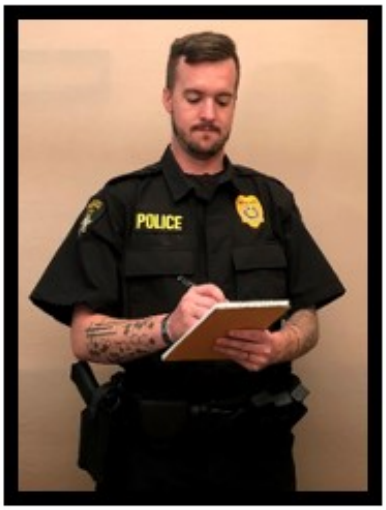


0 1 2 3 4 5 6 7 8 9 10

21. How **anxious** would this officer make you feel? (0=not at all, 5=neutral, 10=very)

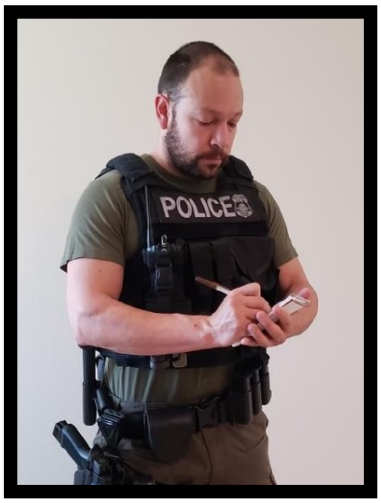
0 1 2 3 4 5 6 7 8 9 10

22. How **hostile** would you feel toward this officer? (0=not at all, 5=neutral, 10=very)



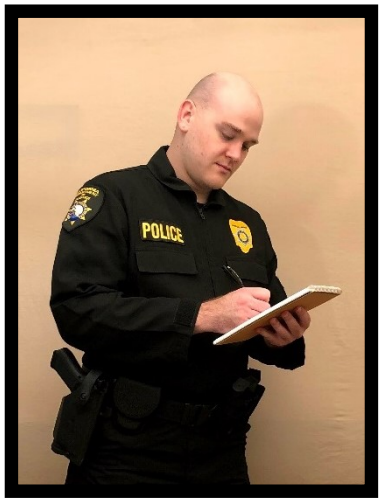
0 1 2 3 4 5 6 7 8 9 10

23. How **compliant** would you be with this officer? (0=not at all, 5=neutral, 10=very)



0 1 2 3 4 5 6 7 8 9 10

24. How **trusting** would you feel with this officer? (0=not at all, 5=neutral, 10=very)



0 1 2 3 4 5 6 7 8 9 10

Section 4. Please provide this general information about yourself.

Please select your gender: (male, female, other)
Please enter your age: (ordinal entry)
Please select your race: (American Indian, Asian, Black, Native Hawaiian or other Pacific Islander, White, Other, Decline)
Please select your ethnicity: (Hispanic or Latino or Spanish origin; not Hispanic or Latino or Spanish origin)

Section 5. Please tell us a little about your background and experiences.

Have you ever been the victim of a crime? (yes or no)
Have you ever called the police for help? (yes or no)
Have you ever received a traffic ticket? (yes or no)
Have you ever been arrested? (yes or no)
Are you, or is anyone in your immediate family in law enforcement? (yes or no)
Do you wear a beard? (yes, no, sometimes)
Do you like beards? (yes or no)

*** THANK YOU --- END OF SURVEY ***