

THE INFLUENCE OF K9 PARTNERS ON LAW ENFORCEMENT OFFICERS

by

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DEDICATION

This project is dedicated to the dogs who are always there for us.

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I greatly appreciate the law enforcement officers (and their K9 partners) who participated in this study. I also want to acknowledge the help of Dr. Shelly Volsche and Dr. Kristin Snopkowski with the reviewing, editing, and statistical analyses.

ABSTRACT

This study aims to examine if and how the lives of K9-handling officers and their police department are impacted by having access to and working alongside K9s. It also considers the possible variation in degrees of attachment to one's dog between K9-handling officers and members of the general public. Through an online survey, questions from the Perceived Stress Scale and the Lexington Attachment to Pets Scale were asked to better understand how working alongside dogs can change levels of stress. It was found that K9-handling officers experience significantly lower levels of stress compared to non-K9-handling officers. Further, it was also found that K9-handling officers experience significantly higher levels of attachment and general connection to their K9 partner compared to members of the public with their companion dogs. Overall, this study suggests that dogs can have a major positive impact on their human partners in typically high-stress work environments, and not just in companionship situations. However, since research in this area is highly limited, more work should be done looking at the positive impacts of dogs on people working in high-stress, niche work environments, such as law enforcement and military. Additionally, more work should be done to examine how working dogs are able to help the well-being of their human partner when both on and off work.

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INTRODUCTION

Dogs have been a valuable part of peoples' lives for thousands of years. They have taken on a wide range of jobs to assist humans and are known to greatly improve the lives of those whom they work and live with. Because of this, research has been done to better understand the benefits of dogs in many everyday situations and for many groups of people. The ability of dogs to help people is incredibly widespread, such that they can help people of all ages and ability across home and work environments.

However, little research has been done examining the impacts of dogs on people working in high-stress jobs. While it has been found that dogs can be beneficial in everyday situations, less is known how they can impact the daily functioning of people under constant stress, such as those working in law enforcement. Therefore, a main aim of this study is to examine if and how the personal and professional lives of K9-handling officers are impacted by having access to and working alongside K9s. With this research, I also want to further examine the specific relationship between K9-handling officers and their K9 partners. The close-knit bond between officer and K9 is highly unique due to the constant pressure of life-threatening work. Therefore, another aim of this study is to examine the degrees of attachment to one's dog between K9-handling officers and members of the general public. Through this comparison, I hope to gain a better understanding of the relationship between humans and their working dogs.

LITERATURE REVIEW

Coevolution of Humans and Dogs/History of Working Dogs

Research suggests domestic dogs (*Canis familiaris*) are the oldest domesticated species. Estimates place their evolution from the wolf (*Canis lupus*) at approximately 40,000 to 15,000 years ago (Serpell, 2021). Since the process of dog domestication began, there are now over 400 unique breeds of dog originating from many countries across the world, in which each has been altered through a combination of artificial selection through human intervention, and natural adaptation to their environments (Galibert et al., 2011; Lupo, 2019; Zhang et al., 2020). Due to these forms of adaptation, there is a large variety in physical and behavioral characteristics which allows for a wide range of purposes, such as hunting, herding, guarding, or just companionship.

There are multiple hypotheses to consider when examining the origin of the coevolution between humans and dogs. One hypothesis for the reasons behind dogs beginning to coevolve alongside humans is the commensal scavenger hypothesis (Serpell, 2021). This hypothesis suggests that wolves slowly domesticated themselves through scavenging for food remains left by hunter-gatherer groups in ancient human settlements, with the less fearful wolves eventually being selected for through continuous human tolerance of their presence (Serpell, 2021). Humans also slowly recognized the benefits that these partially domesticated wolves provided, specifically regarding wolves acting as guards and hunting partners (Driscoll et al., 2009; Serpell, 2021). According to this model, wolves first self-domesticated, then were further shaped by human intervention.

Another hypothesis suggests that dogs began to evolve alongside humans via the pet keeping or cross-species adoption hypothesis. This model is based on observations of pet-keeping in hunter-gatherer groups, demonstrating that people are inclined to capture and raise infant mammals of other species, such as wolf pups (Serpell, 2021). With this hypothesis, the constant exposure to human care from a young age encouraged a set of desired behaviors to develop within the animals, such as the selection for tameness/niceness, which provides the basis as to how humans and dogs developed an adaptive, cooperative social relationship (Kotrschal, 2018; Serpell, 2021).

An alternate proposal to consider is the canine cooperation hypothesis. This model argues that the high levels of social attentiveness, tolerance, and cooperativeness seen in wolves allowed for a stable foundation on which human and dog cooperation was likely built (Range & Virányi, 2015). Through a process of symbiosis, humans unintentionally inserted themselves into the wolves' social structure as cooperative partners working alongside more tolerant wolves. Unlike the other existing domestication hypotheses that focus on the distinct differences between wolves and domestic dogs, Range and Virányi (2015) also examined the similarities between domestic dogs and wolves, specifically with their social attentiveness and tolerance levels for humans and conspecifics. These modern observed behavioral similarities may provide evidence to the baseline wolf characteristics that originally lead to the development of human-dog coevolution.

To support Range and Virányi's (2015) hypothesis, it is possible that the first interactions between humans and wolves were completely mutual (Schleidt & Shalter, 2003). By focusing on the processes of coevolution of humans and wolves, Schleidt and

Shalter (2003) propose that over time the two species began cooperating with each other more due to an increased frequency in hunting of larger hooved herd animals. Regardless of the hypothesis that best explains the beginning of the relationships between humans and dogs, it is overall important to note the value of the reciprocal relationship between species, and that this connection between humans and dogs is what makes this relationship so beneficial (Shipman, 2010).

Benefits of Modern Dog Companionship

Dogs as companions have been shown to provide psychological and social support for people of all ages and mental health statuses (Wilks, 1999). A notable form of human-dog interactions is between children and their families' companion dogs. It has been found that kids who have close relationships with family pets tend to express higher levels of empathy for other people in social situations (Melson, 1991). Additionally, these children tend to hold greater positive attitudes, respect, and overall concern for wildlife around them (Kidd & Kidd, 1997). In addition, the ability to take care of a pet in a responsible way helps to significantly increase levels of self-esteem both in younger children (Bergersen, 1989) and adolescents (Covert et al., 1985). The benefits of animal interactions for children can also be observed in environments outside the home and in addition to family pets. For example, work with schoolchildren found that the animal interaction activities in the classroom significantly improved the social functioning and social skills of the participating children, as well as decreasing observed problem behaviors in and out of the classroom (O'Haire et al., 2013).

While studying the positive relationship between dog ownership at all stages of childhood mental development is valuable, it is also important to consider the impact that

animals can have on the mental health of adults of all ages. For many elderly adults, the ageing process is associated with depressive symptoms, feelings of loneliness, and an overall lack of physical activity, which may also manifest in overall worsening physical and mental health (Krause-Parello et al., 2019). In recent years there has been a shift in public health perspectives to focus more on the unique ways that animals – as well as the positive ways they interact with humans – can improve the quality of life of individuals in elderly populations (Mueller et al., 2018). Research conducted with elderly populations have found that having higher levels of attachment to one's pets has been associated with both higher levels of happiness and decreased loneliness (Antonacopoulos & Pychyl, 2010; Ory & Goldberg, 1983). Research has also found that when dogs are used in visiting programs both for elderly people (Francis et al., 1985) and people with Alzheimer's disease (Beyersdorfer & Birkenhauer, 1990), there is a noticeable improvement in individuals' confidence levels in the ability to successfully interact with others in a social setting. Further, it has been found that when older adults have dogs that they are able to take on walks, there is a notable association with maintaining a healthy weight, a decrease in daily living limitations, fewer visits to the doctor, and more frequent access to exercise (Curl et al., 2017).

For adults of all ages, a common mental health disorder is depression, which is often considered notably more socially and physically disabling than a wide range of other physical conditions (Ormel et al., 1994). While there are many different symptoms commonly associated with depression, one that is often the most debilitating is feelings of loneliness (Wilks, 1999), which can be exacerbated by many external factors of one's life. People working long-term in high-stress positions tend to have a higher frequency of

these debilitating instances of mental health conditions (Stanley et al., 2016). When looking for methods to counteract loneliness and other symptoms associated with depression, pet ownership may help by drastically increasing individuals' exposure to some form of social support (Garrity et al., 1989). Through this, it has been reported that people living completely alone express significantly higher levels of loneliness than those living with a pet (Antonacopoulos & Pychyl, 2010; Zasloff & Kidd, 1994).

There are also many positive external changes that can occur due to the exercise practices that are associated with having a dog, such as noticeable weight loss for overweight individuals and improvement in confidence in one's overall physical appearance (Epping, 2011). Some of the external benefits of caring for a dog often also come with the need to maintain better health behaviors to be able to physically keep up with a pet's needs (Utz, 2014). Dog ownership encourages an increase in social support and bonding between human and dog that would lead to more frequent recreational walking (Cutt et al., 2007). Alongside the many mental benefits of recreationally walking with one's dog, adding more ways to incorporate physical activity into one's day has been shown to greatly improve health in an easy way, since walking is a popular, easy, sustainable, and has a much lower risk of injury compared to many other forms of exercise (Epping, 2011).

The companionship of dogs may also improve physical health through the positive hormonal changes associated with interactions with companion dogs. One hormone that has evolved to have a positive connection with the ownership of companion dogs is oxytocin, specifically surrounding communication between species (Nagasawa et al., 2015). This research conducted by Nagasawa et al. (2015) examined the process of

mutual-gaze bonding (the maintaining of eye contact for an extended period between humans and their dogs). This form of interspecies communication and bonding has led to increases in oxytocin levels when this form of communication is induced. Oxytocin is a hormone primarily involved with regulating social attachment levels, such as through dampening the negative effects of the stress hormone cortisol and heightening the body's reaction to positive stimuli (Heinrichs et al., 2003). This supports the process of humans evolving towards having a unique, hormonally-driven method of interacting with canine companions alongside the other traditional forms of behavioral interactions.

Human cortisol may also be affected when interacting with dogs. While cortisol performs a wide range of important tasks throughout the body, such as influencing metabolic, immune, cardiovascular, and cognitive systems, it is most commonly associated with the body's stress management system (Clow & Smyth, 2020). Further, Clow and Smyth (2020) observed cortisol having the ability to directly and indirectly influence typical brain functioning mechanisms, such that spikes in its levels detected through saliva collection were significantly associated with both greater and more continuous exposure to environmental stressors. Additionally, cortisol works by regulating stress levels in the body through being released as a response to negative stimuli from environmental stressors (Heinrichs et al., 2003). Research has found that consistent, high levels of cortisol are significantly associated with a wide range of psychological disorders, such as depression and anxiety, ADHD, and eating disorders like anorexia (Kamin & Kertes, 2017). For those working in high-stress jobs like law enforcement, the combined effects of consistently being exposed to high levels of stress and greater levels of cortisol in the body are more likely to result in negative coping

mechanisms in response to mental health concerns (Swatt et al., 2007). This may have even been exacerbated in hierarchical social environments where the individual may have reduced agency (Sapolsky, 2004).

Despite the range of negative effects that can occur in humans due to consistently high cortisol levels, dogs provide many outlets to help those suffering from the negative effects of the cortisol's high levels. Having access to a companion dog – or dogs whose primary role is to provide companionship to their owners – can noticeably decrease the perceived levels of depression symptoms and loneliness experienced among a wide range of populations (Garrity et al., 1989). Companion dogs can also significantly decrease the levels of detectable cortisol within humans' bloodstreams (Petersson et al., 2017).

Research has also found that, when compared to other forms of therapy such as art therapy (e.g. coloring in a coloring book), having access to a therapy dog is associated with decreased salivary cortisol levels and improving individuals' scores on the Perceived Stress Scale (Kline et al., 2020). While having access to therapy dogs may not be available to all populations, similar effects are likely to be observed with exposure to most companion dogs. Future research will be beneficial in gaining new knowledge on the specific ways that domesticated dogs can continue to help humans thrive in modern environments.

Alongside the many positives of having domesticated dogs, it is important to also consider the potential downsides to petkeeping. In a review composed by Herzog (2011), research from a range of disciplines was compiled to provide evidence for the downsides that can arise when having a dog. Herzog (2011) provides examples of how pet owners can experience higher levels of psychological health issues, such as depression, anxiety,

and chronic tiredness (Müllersdorf et al., 2010), as well as an increased chance for physiological health issues, such as migraines, gastric ulcers, and hypertension (Koivusilta & Ojanlatva, 2006). Additionally, Herzog (2011) discusses how studies within the field of human-animal interactions may have results that are skewed towards favoring the positive effects of companion animals. This was discussed as being likely due to self-selected reporting of pet owners or inherent biases from the researchers creating the study design (Herzog, 2011). Because of collected findings such as these, more work should be done within research to encourage the engagement with multiple sides of a topic of study.

Value of Dogs in the Workplace

When studying the mental and physical benefits of having a canine companion, it is important to acknowledge how these benefits can cross over into a range of workplace environments. Due to the highly competitive nature of many jobs, there is an increasing need for alternative ways to lower job-related stress and increase the well-being of employees. Through examining the impacts of allowing dogs into company office spaces, it has been found that the presence of dogs in office workplaces greatly improves various aspects of the work environment, such as lowering stress levels, improving communication, encouraging social cooperation, and increasing flexibility within one's daily schedule (Wagner & Pina e Cunha, 2021). In work environments where dog owners typically bring their dogs to work, it has been found that stress levels decrease over the course of the day, while stress levels increase as the day goes on for both people who have dogs but cannot bring them to work and for people without pets (Barker et al., 2012). As further found by Barker et al. (2012), not only were stress levels significantly

higher at the end of the day for dog owners who could not bring their dog to work compared to those who were able to bring in their dog, but there was a significant difference in the stress levels of people who are able bring their dog to work depending on whether or not they brought their dog in to work on any given day of the subsample of people who were allowed to bring their dogs.

Alongside the benefits of canine therapy in traditional company office spaces, there are also many benefits to bringing in dogs to higher stress types of jobs. In jobs such as pediatric nursing – which often results in higher levels of job-related burnout and depression in its workers – it has been found that interactions with dogs is associated with a long list of benefits (Jensen et al., 2021). As found by Jensen et al. (2021), the benefits from interacting with dogs include higher levels of perceived accomplishment at one's job, lesser intention to quit, more positive attitudes regarding one's job, an overall increase in positive emotions and perceived mental health, and lower levels of depression.

The most common roles that dogs fill in the workplace include service roles to aid someone with a disability, visitation roles to socialize with people in healthcare or education settings, or therapy roles to help those requiring mental or physical health help from a psychotherapist or occupational therapist (Foreman et al., 2017). While many people interacting with the dogs in the workplace situations discussed above only receive the benefits of animal interactions for a limited amount of time, the positive mental and physical effects can still be observed compared to those who do not have interactions with dogs at all, such as through increasing individuals' exposure to different forms of social support (Garrity et al., 1989). Through providing assistance with various aspects of

social support, assistive dogs help those with a wide range of physical and neurological conditions, such as Autism Spectrum Disorders, receive more employment support in the workplace (Foreman et al., 2017). Assistive dogs also help provide their handlers more confidence and assistance in being able to get involved in an integrated work setting (Groomes et al., 2014).

While there has been a great deal of previous research conducted discussing both the positive impacts of dogs in the workplace and the common beneficial roles that dogs take on to assist humans, there are still fields of assistant animals that are less commonly included in research. Specifically, research studying the impacts of dogs in office spaces and with the public tend to exclude the study of police or military dogs, as well as any recreational or agricultural activity animals (e.g., hunting dogs, herding dogs) as they primarily assist specific groups of people in niche jobs rather than the general public (Foreman et al., 2017). Further, because of limited prior research examining the impacts of workplace support dogs on those working in first responder positions, limitations are present when taking the results into consideration. While it has been found that first responders that have access to support dogs may experience temporary relief of job stressors, it is difficult to determine if there are long-term influences on overall mental well-being (Curley et al., 2021). Because of this discrepancy in the amount of research available favoring the benefits of dogs in non-niche-specific workplaces, the current research aims to add more information regarding this lesser-recognized area of human-dog working relationships.

High-Stress Work and its Effects

It is important to take into consideration the uniquely difficult toll that taxing jobs in high-stress sectors of the workforce may have on the mental well-being of the individuals working in those fields. Research investigating the effect of work stress on mental health should account for the unique mental health conditions and stressors that accompany a wide range of first responder jobs, such as police services, fire services, and medical and forensic services. In these professions, one frequently encounters physically and mentally taxing situations, as well as potentially life-threatening events. Instances of mental health conditions such as depression, anxiety, social alienation, and PTSD are frequently recorded (Perrin et al., 2007; Wagner et al., 2010).

Additionally, job positions such as these require individuals to consistently interact hands-on with stressful situations. This results in individuals being placed at higher risk for developing serious mental health conditions that are deeply rooted in work-related traumas (Brondolo et al., 2018; Coleman et al., 2016). Despite research documenting that built-in preventative measures within first responder positions aimed to lower the chances of developing or worsening psychiatric conditions – such as close-knit camaraderie and background screenings – these are not always effective (Stanley et al., 2016). As gathered by Stanley et al. (2016), there is a clear prevalence and concentration of PTSD cases among first responders. However, research still needs to be conducted regarding the prevalence of first responder deaths by suicide, the different forms of suicidal thoughts and behaviors expressed by those in these jobs, and the utilization of a broader range of methods over a longer span of time to better understand population-

specific risk factors and preventative measures surrounding the heightened risk for suicide (Stanley et al., 2016).

For police officers, there is the frequent job requirement to get involved with hands-on interactions with risky and stressful situations. It has been observed that the longer officers work within general police, parole, and probation positions, there may be higher levels of perceived stress (Patterson, 1992). The combination of niche job-related stressors – such as the quantity of high-risk work and the wide range of scenarios in which one’s skills are constantly required – and distinct types of social support leads to highly unique levels of individual mental strains within law enforcement officers (Kaufmann & Beehr, 1989). Two distinct police-specific factors have been proposed as reason for increased rates of suicide: the restriction of cognitive flexibility and increased compartmentalized thinking when dealing with stress or one’s problems, and a decrease in seeking help from others in multiple life roles when dealing with psychosocial stress (Violanti, 1997). These unique pressures often arise due to the difficulty of talking about high-stress and possibly dangerous work with family or friends. The intense and dangerous nature of police work may also create situations in which one does not feel comfortable sharing sensitive aspects of a job with those not in the profession. In addition to increased rates of suicide, police officers tend to become involved with negative coping mechanisms to deal with high stress levels, such as high levels of alcohol consumption (Swatt et al., 2007).

It is becoming increasingly important to work towards implementing programs to help reduce police officer stress, particularly due to notably high suicide rates and other negative coping mechanisms. Thankfully, programs encouraging positive steps in mental

health and decreasing stress are slowly being implemented by police departments with positive results. In addition to having a standard suicide prevention procedure, the Badge of Life Psychological Survival for Police Officers Program developed a self-care program to help officers focus on their ability and responsibility to care for their own emotional well-being (Levenson Jr. et al., 2010). As further discussed by Levenson Jr. et al. (2010), this program also encourages officers to work on resilience as a part of stress-resistance, as well as encouraging education on job-related stressors and traumas for officers in all levels of their law enforcement careers. More localized efforts have also been developed, such as the Together for Life suicide prevention program for the Montreal police department (Mishara & Martin, 2012). Mishara and Martin (2012) observed that, after implementing training for all members of the law enforcement units, creating a volunteer helpline, and promoting the program, the suicide rates within the Montreal police department decreased significantly. While the amount of research in this area is small, the work that has been done may act as a starting point for future work in this niche area of study and application. Further, there is a steady increase in social awareness of the naturally high levels of physical and mental strain involved with law enforcement jobs. Therefore, it is important to search for effective outlets for law enforcement officers to better cope with job-related strains. However, there is still a great more work to do to better expand efforts to help officers with work-related strains. As a strong portion of prior research in this field was not conducted in the United States, it is essential to plan out expansions of these programs in additional cities and states where law enforcement-related stressors occur.

Importance of Dogs in Police Work

An important aspect of the officer-K9 relationship to consider is the unique working dynamic involved with having animals working within law enforcement. With most jobs involving dogs, there is often some degree of overlap between the behaviors required for the job and general companion dog behaviors. However, for police dogs, there is a clear divide between the working behaviors and companion behaviors expected (Sanders, 2006). As discussed by Sanders (2006), conflict can arise with how one interacts with police dogs, specifically through deciding how and when to treat the dog as a coworker or as a family companion. Additionally, depending on the individual police department, there is likely variation in how K9-handling officers house, feed, and play with their K9s. Based on this potential conflict of behaviors, more research should be conducted to better understand the specific perspectives of K9-handling officers. Additional research in this field should be encouraged, as there is little prior work that covers the relationship between K9s and their handlers.

Prior research done by Hart et al. (2000), focused on the relationship between officers and their K9s, as well as the potential positive and negative effects of K9 work. The work found that not only did officers report that the dogs improved the effectiveness of their department, but that an increased time spent playing with and training their dogs improved their health and well-being, levels of exercise, and general satisfaction with working as a K9 officer (Hart et al., 2000). This research notably mentioned the mental and physical stressors involved with working in law enforcement as a K9 officer, such as potential increased burnout in the relationship between officer and K9 due to a high frequency of calls needing the dog's assistance (Hart et al., 2000). However, the primary

focus of this prior research was on the positive, less stressful aspects of the officer-K9 bond. Additionally, this work only briefly mentioned the range stressors involved with both K9 work and general law enforcement work. Because of this, the current study aims to examine the positive aspects of having a K9 partner while in law enforcement, as well as acknowledging and measuring the stress levels of non-handlers working in this profession.

Research Questions and Hypothesis

This research examined the relationship between law enforcement officers and their K9 partners, specifically through the ways that K9 partners improve the quality of their handling officer's lives. Additionally, this study examines if there is a difference in attitudes towards animal companions between K9-handling officers and the general public. There were two primary hypotheses being investigated for this study. I hypothesized that 1) in police departments with K9 teams, there will be a noticeable difference in the perceived stress levels between officers who are K9 handlers and those who are not, and 2) that K9-handling officers – particularly when being compared to members of the general public – will express a stronger set of positive attitudes towards their animal companions.

METHODS

This study was approved by the Social and Behavioral Institutional Review Board and the Office of Research Compliance at Boise State University (Protocol Number 041-SB22-092).

Recruiting Participants

I recruited law enforcement officers from police forces with active K9 teams in the United States. Within these police forces, both K9-handling officers and officers across all other units were invited to participate. Police forces were contacted with a combination of emails and/or text messages sent to 1) various police forces with K9 units found via an online search, 2) reaching out to family and friend contacts who currently work in or know someone who works in various positions in law enforcement and seeing if they would be willing to participate, and 3) encouraging those individuals from options one and two to share the information of this study taking place via word-of-mouth (snowball sampling) to others within law enforcement and K9 handling communities that they know may also be willing to participate. As the number of family or friend contacts associated with law enforcement was small, the large majority of responses came from the randomly emailed departments. My minimum recruitment goal was 100 participants.

Method of Collecting Data

An online survey via Qualtrics (Qualtrics, Provo, UT) was used to obtain responses from all participating law enforcement officers – regardless of whether they are a K9 handler. An online survey was the ideal method available to utilize, due to an ability to be easily shared among law enforcement officers within a department, as well as easily completed in a reasonable time frame and on a range of devices (mobile phone, computer, etc.) This survey began by providing the informed consent document, capturing the participant’s agreement to consent as the first question in the dataset. Participants were then asked whether they are a K9-handling officer, and their response directed them to one of two sets of questions depending upon this response. Both groups received questions regarding perceived stress, demographics, and pet ownership and interactions.

To investigate perceived stress levels, both groups answered the Perceived Stress Scale (PSS) questionnaire created by Cohen et al. (1983), which asks about various aspects of their perceived levels of stress throughout the past month. The Perceived Stress Scale was used in this study to examine if there is a relationship between higher levels of interaction with dogs in the workplace environment (particularly with the K9-handling officers) and generally lower levels of stress. Examples of questions in the Perceived Stress Scale include “in the last month, how often have you felt that you were unable to control the important things in your life,” and “in the last month, how often have you felt that things were going your way.” This questionnaire consists of two unique subscales to help gauge the levels of perceived stress levels of both K9-handling officers and non-K9 handling officers: the *Perceived Helplessness* subscale and the *Perceived Self-Efficacy*

subscale (Taylor, 2015). The *Perceived Helplessness* subscale consists of 6 questions (Q1, Q2, Q3, Q6, Q9, Q10) that remain forward coded with the negative tone. The *Perceived Self-Efficacy* subscale consists of 4 questions (Q4, Q5, Q7, Q8), and were reverse coded due to originally being phrased in a positive tone. The PSS provides participants with a range of numbered responses from zero to four to choose from: zero equaling “never,” one equaling “almost never,” two equaling “sometimes,” three equaling “fairly often,” and four equaling “very often.”

The K9 officers received questions that are the modified versions of the questions from the Lexington Attachment to Pets Scale (LAPS) by Johnson, Garrity, and Stallones (1992). For the current study, the phrasing of the questions in the LAPS – a survey questionnaire meant to gauge aspects of the human-animal bond related to general attachment, people substituting, and animal welfare – was modified with permission granted by first author Dr. Timothy Johnson (Johnson and Volsche, personal communication May 4, 2022) to fit law enforcement related terminology by substituting the word “K9” for “pet.” This survey consists of three unique subscales that help to best gauge the attitudes of K9-handling officers towards their animal partners: *General Attachment*, *People Substituting*, and *Animal Rights/Welfare*. Examples of the *General Attachment* questions include “My K9 and I have a very close relationship” and “My K9 makes me feel happy.” For the *People Substituting* questions, examples include “I love my K9 because they are more loyal to me than most of the people in my life,” and “I love my K9 because they never judge me.” Examples of the *Animal Rights/Welfare* questions include “I believe that K9s should have the same rights and privileges as human officers,” and “I feel that my K9 is a part of my family.” The LAPS questionnaire

provides participants with a range of numbered responses from one to four to choose from: one equaling “strongly disagree,” two equaling “disagree,” three equaling “agree,” and four equaling “strongly agree.”

The survey ended with typical demographic questions (e.g., sex, age) as well as questions relating to rank and years in the police force. Additionally, questions were asked about the number of dogs and/or other animals one grew up with, what dogs and/or other animals one currently has in the home, and various questions on the general care of the animals. A randomized subsample of previously published LAPS scores from United States dog and cat owners (see Volsche, 2021) was also used to provide a comparison for the K9 officers’ LAPS scores in relation to their K9 partners.

Data Analysis

All data analysis took place in IBM SPSS V27.0. Two items in the LAPS were reverse coded (H and U), and Cronbach’s alpha reliability scores were calculated for the total LAPS scores ($\alpha = 0.949$) and the three subscales (*General Attachment*, $\alpha = 0.919$; *People Substituting*, $\alpha = 0.826$; *Animal Rights/Welfare*, $\alpha = 0.866$). The Cronbach’s alpha reliability was calculated for the total PSS scores ($\alpha = 0.828$) and the two subscales (*Perceived Helplessness*, $\alpha = 0.857$; *Perceived Self-Efficacy*, $\alpha = 0.71$). For the PSS, the PSS subscales, the LAPS, and the LAPS subscales, good to excellent levels of internal consistency confirm the reliability of these scales in a law enforcement population.

An independent-samples t-test was additionally used to examine whether working with a K9 partner would influence an officer’s perceived stress level in comparison to officers who do not work with a K9 partner. Another independent-samples t-test was used to compare the LAPS responses of K9 officers received from our survey with a randomly

selected subsample of previously published LAPS responses of pet-owning members of the public (Volsche, 2021). As the original number of participants from the original study of the general public was much larger ($n = 917$) than the number of K9 officers responding to this study ($n = 72$), we randomly selected for approximately ten percent of the general public responses to achieve a more equal distribution of participants in each group. Through this random selection, the data analysis consisted of responses from 72 K9-handling officers and 93 responses from members of the general population. This comparison was done to determine if there is any significant difference between the ways in which K9 handling officers and members of the general population view their dog companions.

RESULTS

Baseline Participant Demographics

Initially, we received a total of 154 responses. After sorting through the data and eliminating any incomplete responses – in which participants only answered a portion of the survey sections – our final sample totaled 130 useable responses (72 K9-handling officers and 58 non-K9-handling officers). The specific frequency distributions for the ages, sexes, levels of education, yearly income, and years of experience in law enforcement are detailed in Table 1.

Table 1. General Demographics of Participants (total n = 130).

	K9 Officers (n = 72)	Non-K9 Officers (n = 58)
	n(%)	n(%)
Age		
18-24	1(1.4)	0(0)
25-35	31(43.1)	15(25.9)
36-45	25(34.7)	21(36.2)
46-60	13(18.1)	20(34.5)
60+	2(2.8)	2(3.4)
Sex		
Male	64(88.9)	46(79.3)
Female	8(11.1)	12(20.7)
Education		
Vocational Degree	3(4.2)	0(0)
High School	17(23.6)	8(13.8)
Undergraduate Degree	42(58.3)	28(48.3)
Graduate Degree	10(13.9)	19(32.8)
Doctoral Degree	0(0)	3(5.2)
Yearly Income		
\$10,000 - \$30,000	1(1.4)	0(0)
\$30,000 - \$50,000	1(1.4)	3(5.2)
\$50,000 - \$70,000	10(13.9)	9(15.5)
\$70,000 - \$90,000	24(33.3)	17(29.3)
\$90,000+	31(43.1)	26(44.8)
Prefer not to Disclose	5(6.9)	3(5.2)
Years in Law Enforcement		
0 – 5	8(11.1)	7(12.1)
6 – 10	20(27.8)	12(20.7)

11 – 20	27(37.5)	15(25.9)
20+	17(23.3)	24(41.4)

Independent-Samples *t*-Tests

An independent samples *t*-test was used to determine if there is a significant difference between the perceived levels of stress between K9 handling officers and non-K9 handling officers. I found that K9-handling officers ($M = 11.81$, $SD = 4.88$) express significantly lower levels of stress compared to their non-K9-handling officer counterparts ($M = 13.79$, $SD = 5.52$; $t(128) = -2.176$, $p = 0.031$). The Cohen's *d* effect size value was also calculated for this *t*-test ($d = -0.384$). The graph representing the results of this *t*-test can be seen in Figure 2.

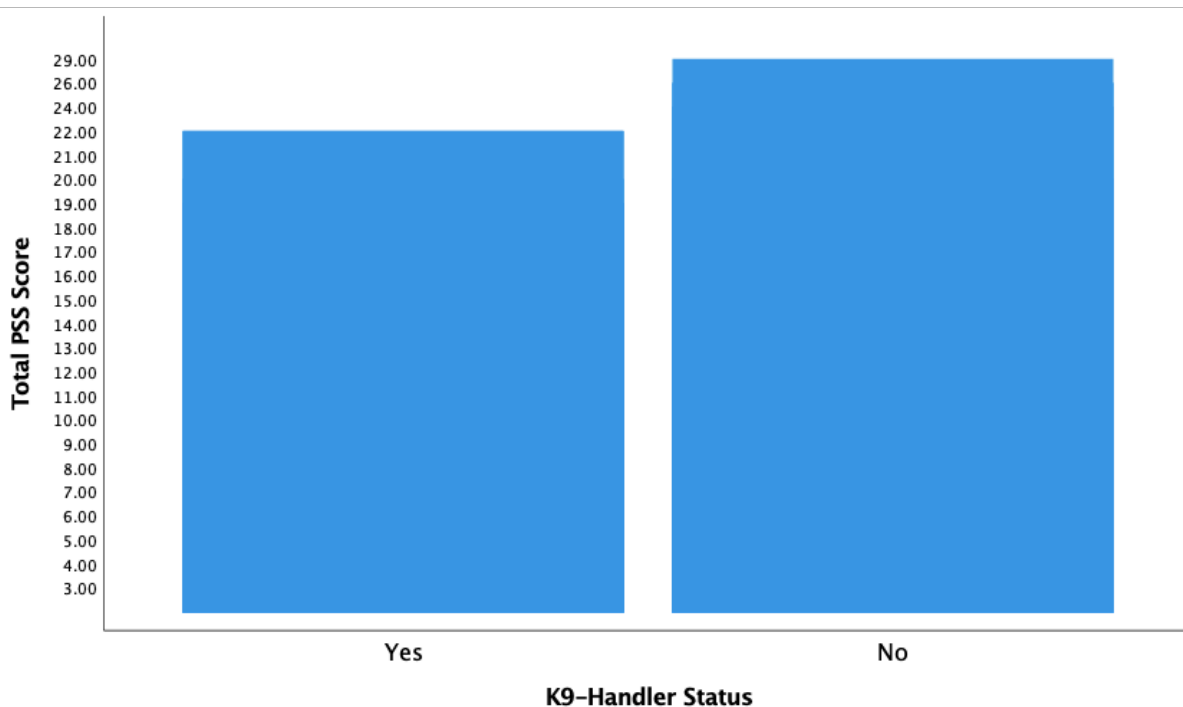


Figure 1. Differences in Perceived Stress Scale Scores of K9-Handling vs Non-K9-Handling Officers

An additional independent samples *t*-test was used to determine if there was a significant difference between the animal-specific demographics of the K9-handling and non-K9-handling officers. This *t*-test found that there was no significant difference in responses between K9-handling officers ($M = 4.49$, $SD = 2.737$) and non-K9-handling-officers ($M = 4.05$, $SD = 2.843$) for where their pets sleep, ($t(128) = 0.884$, $p = 0.378$). Regarding the type of food given to their pets, there was no significant difference in responses between K9-handling officers ($M = 2.17$, $SD = 1.538$) and non-K9-handling officers ($M = 2.71$, $SD = 2.377$); $t(128) = -1.565$, $p = 0.12$). Finally, for the amounts of time spent playing with their pets per day, there was no significant difference in responses between K9-handling officers ($M = 2.69$, $SD = 1.38$) and non-K9-handling officers ($M = 2.55$, $SD = 1.327$; $t(128) = 0.956$, $p = 0.552$).

A Pearson correlation was used to determine if there were any significant correlations between K9-handling officer responses for the Perceived Stress Scale and the Lexington Attachment to Pets Scale. There was a statistically significant positive correlation between the total LAPS scores and the total PSS scores ($r(70) = 0.355, p = 0.002$), the *Perceived Helplessness* subscale scores ($r(70) = 0.329, p = 0.005$), and the *Perceived Self-Efficacy* subscale scores ($r(70) = 0.247, p = 0.037$). There was a statistically significant positive correlation between the *General Attachment* subscale scores and both the total PSS scores ($r(70) = 0.322, p = 0.006$) and the *Perceived Helplessness* subscale scores ($r(70) = 0.326, p = 0.005$). However, there was no statistical significant correlation between the *General Attachment* subscale and *Perceived Self-Efficacy* subscale ($r(70) = 0.183, p = 0.123$). There was a statistically significant positive correlation found between the *People Substituting* subscale scores and the total PSS scores ($r(70) = 0.397, p < 0.001$), the *Perceived Helplessness* subscale scores ($r(70) = 0.34, p = 0.003$), and the *Perceived Self-Efficacy* subscale scores ($r(70) = 0.317, p = 0.007$). Finally, there was a statistically significant positive correlation between the *Animal Rights/Welfare* subscale and the total PSS scores ($r(70) = 0.252, p = 0.033$). However, there was no statistically significant correlation between the *Animal Rights/Welfare* subscale scores and both the *Perceived Helplessness* subscale ($r(70) = 0.223, p = 0.059$), and the *Perceived Self-Efficacy* subscale ($r(70) = 0.189, p = 0.112$). The full set of results for the Pearson correlation are detailed in Table 2. The scatterplot representing the correlation between the total LAPS scores and the total PSS scores are also detailed in Figure 2.

Table 2. Pearson correlations between the totals and each subscale of the PSS and the LAPS for K9-handling officers.

		Total PSS Scores	Perceived Helplessness PSS Subscale	Perceived Self-Efficacy PSS Subscale
General Attachment LAPS Scores	Correlation Coefficient	0.322**	0.326**	0.183
	Significance (2-tailed)	0.006	0.005	0.123
People Substituting LAPS Scores	Correlation Coefficient	0.397**	0.34**	0.317**
	Significance (2-tailed)	<0.001	0.003	0.007
Animal Rights and Welfare LAPS Scores	Correlation Coefficient	0.252*	0.223	0.189
	Significance (2-tailed)	0.033	0.059	0.112
Total LAPS Scores	Correlation Coefficient	0.355**	0.329**	0.247*
	Significance (2-tailed)	0.002	0.005	0.037

Notes: * = correlation is significant at the 0.05 level (2-tailed); ** = correlation is significant at the 0.01 level (2-tailed).

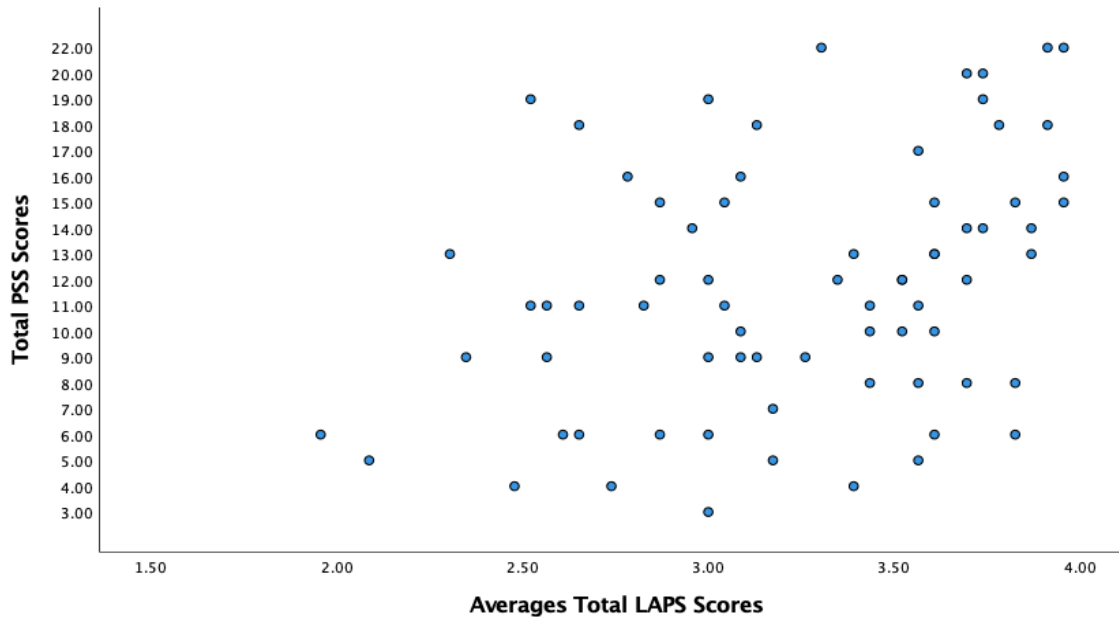


Figure 2. Scatterplot of correlation between the averages of the Total LAPS scores and the Total PSS scores for K9-handling officers.

Another independent samples *t*-test was used to determine if there was a significant difference between the total LAPS scale and three LAPS subscale responses collected from members of the general population (sample 1, collected by Volsche, 2021) and from the K9 handling officers recruited for this study (sample 2). This *t*-test found that the K9-handling officers ($M = 74.54$, $SD = 11.53$) have significantly higher scores on the LAPS compared to those of the general public ($M = 34.98$, $SD = 10.11$; ($t(163) = -23.43$, $p < 0.001$). The Cohen's *d* effect size value was also calculated for this *t*-test ($d = 10.76$). For the *General Attachment* subscale of the LAPS responses, the K9-handling officers ($M = 3.41$, $SD = 0.48$) have significantly higher scores compared to those of the general public ($M = 1.33$, $SD = 0.38$; ($t(163) = -30.91$, $p < 0.001$). The Cohen's *d* effect size value was also calculated for this *t*-test ($d = 0.43$). For the *People Substituting* subscale of the LAPS responses, the K9-handling officers ($M = 2.89$, $SD = 0.59$) have significantly higher scores compared to those of the general public ($M = 1.81$, $SD = 0.61$;

($t(163) = -11.44, p < 0.001$). The Cohen's d effect size value was also calculated for this t -test ($d = 0.60$). For the *Animal Rights/Welfare* subscale of the LAPS responses, the K9-handling officers ($M = 3.36, SD = 0.6$) have significantly higher scores compared to those of the general public ($M = 1.54, SD = 0.52; t(163) = -20.92, p < 0.001$). The Cohen's d effect size value was also calculated for this t -test ($d = 0.55$). The results for this t -test are represented in Table 3.

Table 3. Independent samples t-test results for the comparison between Lexington Attachment to Pets Scale (LAPS) responses between K9-handling officers and members of the general public.

	K9 Officers (n = 72)	General Population (n = 93)	p	Cohen's d
Scale 1 Mean	3.41	1.33		
Scale 1 Standard Deviation	0.48	0.38		
Scale 1 p -value			< 0.001	
Scale 1 Cohen's d				0.43
Scale 2 Mean	2.89	1.81		
Scale 2 Standard Deviation	0.59	0.61		
Scale 2 p -value			< 0.001	
Scale 2 Cohen's d				0.60
Scale 3 Mean	3.36	1.54		
Scale 3 Standard Deviation	0.6	0.52		
Scale 3 p -value			< 0.001	
Scale 3 Cohen's d				0.55
Total Mean	74.54	34.98		
Total Standard Deviation	11.53	10.11		
Total p -value			< 0.001	
Total Cohen's d				10.76

Notes: Scale 1 = General Attachment; Scale 2 = People Substituting; Scale 3 = Animal Rights and Welfare; Total Score = Total LAPS Score (Johnson et al., 1992).

DISCUSSION

Based on the results of the current study, I found that K9-handling officers self-reported having lower levels of stress compared to non-K9-handling officers. Further, K9-handling officers showed higher levels of attachment and more positive attitudes towards their K9 partners compared to a sample of the general public with the companion animals in their homes. However, I found that there was a correlation between K9-handling officers' higher levels of stress and higher levels of attachment towards their K9 partners.

At first look, it may seem that the positive correlation between K9-handling officer's high stress levels and high levels of attachment to their K9 partners contradicts the rest of the study's findings. However, these results can also greatly support the rest of the findings. It should be considered that having the responsibility to care for another being during stressful events adds a great deal of weight to one's shoulders. For law enforcement officers, this stress is often much stronger due to continuous exposure to stressful or traumatic events, which may lead to negative effects on themselves or others they are close with. However, for these individuals, having others to rely on is essential. Because of this, having others constantly with you – such as one's K9 partner – can provide mental health support by being a consistent presence to feel connected with both during and after having shared stressful or traumatic events. Despite the correlation data seemingly contradicting the rest of the data, it actually helps to support the findings that the unique bond between humans and dogs is beneficial in many situations.

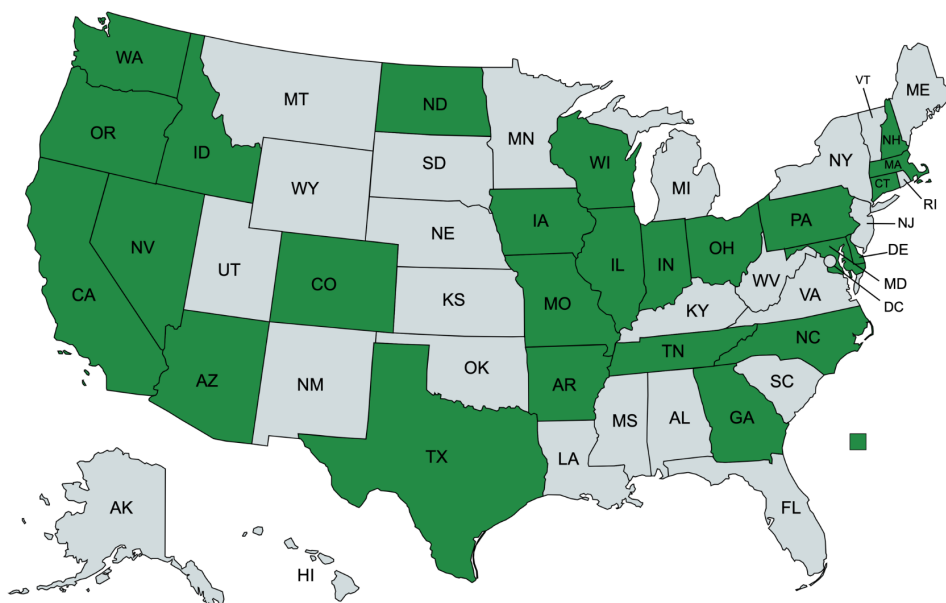
In comparison to prior studies' findings, the current project's results follow in support of other research studying the relationship between law enforcement officers and their K9s. Similar to the findings by Hart et al. (2000), having a K9 partner was shown to improve the ability of officers to deal with the many tasks involved with working in law enforcement. Specifically, I found that the K9-handling officers overall reported they have lower levels of stress reactions to various life events compared to non-K9-handling officers. To further compare to prior research, I utilized a different model than the one used by Hart et al. (2000) to examine the positive sides of the officer-K9 bond. The utilization of a different model was done to see if the equally positive sides of the officer-K9 bond could be observed regardless of the research methodology being used. Because of this, I used the Lexington Attachment to Pets Scale responses from K9 officers compared to responses of members of the general public. Despite the different research approach, I also found that K9 handlers express a uniquely high, close relationship with their K9. This finding is valuable as it represents how strong the bond between officers and their K9 partners is, and that examples of that bond's strength can be observed through multiple different scientific methods.

The current study supported the findings of research looking at the benefits of dogs being present in other working situations – regardless of whether the job is inherently highly stressful. With inherently stressful work, an example to consider is research conducted by Jensen et al. (2021) with pediatric nurses. As found by Jensen et al. (2021), those able to interact with dogs expressed a range of decreased stress feelings associated with work and general aspects of life. Further, similar findings were gathered and supported by Barker et al. (2012) with general workplaces. Despite the lack of high-

intensity stressors like those in law enforcement positions, having the constant presence of dogs in a general workplace provides similar effects of K9s for their handlers. This similarity is represented in an overall decreased level of reported stress throughout the workday, especially when compared to those who do not have or consistently work alongside an animal (Barker et al., 2012). The research conducted for the current study further backs up the research supporting the benefits of dogs for people in high-stress workplaces by contradicting the findings by Herzog (2011). The findings collected by Herzog (2011) stated that, depending on the situation, there may be no noticeable effect and a notably negative effect of having companion animals. However, the current study backs up prior research in favor of having companion animals in a wide range of scenarios such as those discussed above. Additionally, the current study provides additional strong benefits for the keeping of animals in high-stress job situations.

Participant responses may have been impacted by unique life experiences and choices. Some of these factors include the age, sex, income, and level of education of participants. This natural wide range of life experiences and decisions leaves room for innate differences in how officers respond to various life events. Additionally, since the survey was sent to and shared by law enforcement departments across the United States, it should be acknowledged that attitudes towards animals and how people are taught to deal with their stress levels can be impacted by how and where one was raised (state, city, population of one's city, etc.). This range of states from which police departments agreed to participate can be seen in Figure 3. Because the officers' life experiences cannot be changed, it was accepted that there would likely be innate differences in how individuals would respond to the questions in the survey. It may be beneficial for future replications

of this study to specifically examine any significant personal and geographic demographic differences between participants alongside comparisons of the LAPS and PSS results.



Created with mapchart.net

Figure 3. Map of the United States representing the states from which police departments agreed to participate

Note: the coloring of green indicates states where members of at least one police department agreed to participate in the current study

Another factor of demographics to consider is the range of experiences that participants have within the field of law enforcement. The current study found that, even within the comparatively small sample size, there was a notable distribution of the years participants worked in law enforcement. Alongside the variation in time spent in law enforcement, the intensity and number of jobs assigned is likely to also vary depending

on factors like the age of officers and where the department is located in the United States. Because of these factors, the levels of stress experienced by officers is likely to vary regardless of position. Likewise, whether or not officers have a K9 partner can further shape how one may approach stressful situations. For many police departments, the nature of being a K9 officer is often highly self-selecting. Within these departments, officers are often required to complete extra work and applications to become a K9 officer. Further, it is important to consider that having a K9 partner may influence the type and intensity of jobs one gets called on, inherently changing the degrees of stress put on officers. Because of these factors, officers who work with K9s often have a higher level of drive and devotion for many aspects of their work.

Despite working to ensure that the questions were as neutral and inoffensive as possible, how each individual may respond to any question is extremely variable. Responses may have varied due to questions on the sensitive topic of personal stress levels being asked. Due to a wide range of mental states participants may have been in while taking the survey, responses to the Perceived Stress Scale had more potential to vary. Additionally, the informed consent document participants had to agree to before completing the survey contained suicide prevention and mental health resources. Seeing these resources available before taking the survey may have resulted in presumptions being made about what responses may be preferred for certain sections of the survey. Future research may find it beneficial either to reorganize the order of questions asked or provide a stronger warning/summary of the questions being asked. This may be beneficial by allowing officers more time to be prepared for possibly distressing questions, or to decide they no longer want to participate in the survey.

Another confounding variable to consider is the size of the sample population of the study. Compared to the actual number of both K9-handling and non-K9-handling officers working in the United States, the total sample size of 130 participants for this study is extremely small. The conclusions reached with this study may not be fully generalizable, despite the statistically significant findings. As such, more research should be done to further test the hypotheses. To better account for the small sample size concern, any future replications should apply stronger methods of reaching out to law enforcement departments for possible participation. These methods of communication should include a longer period of time allotted to contact participants, as well as sending out multiple emails over time as reminders.

Additionally, the data on the general population's attitudes towards their companion animals used is part of a much larger data set. This required that we randomly subsample from an already self-selected sample. Because of this, a notably small random sample was used in order to conduct a fair comparison between K9-handling officers and members of the general public. Additionally, these members of the general public actively chose to participate in the original survey, so responses being analyzed were only from those willing to share their experiences, not every pet owner. Therefore, the usage of only a small fraction of this large sample group may not have accurately represented the differences between K9-handling officers and the general public to the fullest extent.

Future replications of this study will provide useful additional information in determining the validity of the current results. First, replications of this study will provide a larger range of demographic responses than the ones for this study. Through this method, future replications will paint a better picture of the demographic makeup of law

enforcement departments. Increasing the number of participants will also provide a deeper understanding of similarities and differences in law enforcement departments across a much larger area of the United States. Specifically, gaining more details on the size and location of the city and state one grew up in may also change how one views and treats animals. Future research assessing these differences may be able to see if officers' upbringing and early-life attitude towards animals influences factors such as whether or not they become a K9-handling officer and/or their levels of attachment to animal companions in their lives. Overall, any additional sets of data gathered in future replications using this deeper demographic questioning will provide a better look into how officer participants' life histories influence how their jobs are done.

The findings of this study provide a starting point for improving the understanding of the benefits of human-dog cooperation in high-stress job environments. Because of this, the current study may also act as a branching off point for asking similar questions regarding other populations that work with dogs in other high stress positions. In particular, the format of research used in this study may be applied to studying the responses of people in other high-stress or first responder type positions, such as active duty military personnel and those working in search and rescue. Similar to police work, comradery between those in military and search and rescue fields is extremely valuable in the success of departments. These potential areas of research can further expand upon the correlation found between K9 officers' higher attachment levels to their K9 partners and higher levels of stress found in the current study. While it has been discussed that comradery may not always be effective in counteracting negative job-related stressors (Stanley et al., 2016), it should not be fully discounted.

With these high-stress positions, the jobs individuals are being tasked with are often highly sensitive in nature and would be considered traumatic to an average person. Experiencing these taxing events may cause those in these niche careers to feel more alone due to not having access to many others with shared experiences that they can talk to. Therefore, those working in physically and emotionally taxing environments should be allowed access to a wide range of companions who have similar shared experiences. More work can be done with this idea through the creation of smaller city- or state-wide support programs that can connect more people from across a larger area. Additionally, more groups can be formed through similar means specifically for those with K9 partners. These additional groups would be greatly helpful because the unique mental and physical pressures of working with K9s, such as a large amount of time spent training and caring for the dog and the mental stress of worrying for the K9's well-being with every call on-duty (Hart et al., 2000). Providing this type of support for both officers and their K9s would hopefully allow for greater efficiency with the officer-K9 working team and an increase in the mental security and bond between humans and their dog partners in taxing situations. These support systems for officers would also allow for access of better means to manage stressors that come along with law enforcement positions.

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APPENDIX A

Informed Consent Document

Informed Consent Document



INFORMED CONSENT FORM
Study Title: The Influence of K9 Partners on Law Enforcement Officers
Principal Investigator: Dr. Shelly Volsche
Co-Principal Investigator: Sydney Schultz
Sponsor:

You are invited to participate in a research study. This consent form provides you with the information needed to understand why this study is being done and why you are being invited to participate. It will also describe what will be expected of you as a participant, as well as any known risks, inconveniences or discomforts that you may have while participating. We encourage you to ask questions at any time. If you decide to participate, you will be asked to acknowledge your consent at the bottom of this page, and it will be a record of your agreement to participate. You may print a copy of this page to keep.

PURPOSE AND BACKGROUND

The purpose of this research is to examine the ways that working K9s, specifically in police forces, impact the wellness of those continually working with them. You are being asked to participate in this study because you are an adult (18 years and older), living in the United States, and working in the law enforcement profession in some capacity, in particular a department that utilizes K9 partners while on duty.

PROCEDURES

If you agree to be in this study, you will participate in the following:

- One 20-minute online survey about you, your work environment surrounding the use of K9s in law enforcement departments, and your levels of stress.

RISKS

The survey will include a section requesting demographic information. The population being surveyed potentially encompasses the entirety of the United States, and while unlikely, the combined answers to these questions still have the potential to make an individual person identifiable. We will make every effort to maintain confidentiality and security of data. However, if you are uncomfortable answering any of these questions, you may opt to discontinue the survey at any time by closing your web browser.

Likewise, we understand the sensitivity of this topic, and some of the survey questions might make you feel uncomfortable or upset. You are always free to take a break or to stop your participation at any time. We also encourage you to reach out to a local mental healthcare provider should you become upset by the survey content and need support.

If you are in immediate crisis, please reach out to the [National Suicide Prevention Lifeline's Crisis Chat](#) or call **1-800-273-8255**. You may also reach out to [Copline](#) through their website, or by calling **1-800-267-5463**. If you are a K9 handling officer in need of additional support, reach out to the [Project K-9 Hero](#) organization for assistance.

BENEFITS

There will be no direct benefit to you from participating in this study. However, the current study may encourage law enforcement officers to care for and treat better their K9 partners, as well as potentially encouraging law enforcement officers to want to further expand their own K9 units. It may also offer insights into the welfare of departments who include K9s. In addition to these individual-based benefits, this study will allow for a better understanding of the relationships between law enforcement officers and their K9 partners. Additionally, this research will provide a clearer understanding of the potential physical and mental health benefits that having a working dog can provide.

EXTENT OF CONFIDENTIALITY

Reasonable efforts will be made to keep the personal information in our research records private and confidential. Any identifiable information obtained in connection with this study will remain confidential and will be disclosed only with your permission or as required by law. The members of the research team and the Boise State University Office of Research Compliance (ORC) may access the data. The ORC monitors research studies to protect the rights and welfare of research participants.

PAYMENT/COMPENSATION

You will not be paid or compensated for your participation in this research study.

PARTICIPATION IS VOLUNTARY

Your decision to participate in this research study is entirely voluntary. You may withdraw from this research study at any time without penalty of any kind or loss of benefits to which you are otherwise entitled. To do so, please close your web browser/tab.

QUESTIONS

If you have any questions or concerns about your participation in this study, you may contact the Principal Investigator, Dr. Shelly Volsche: 208-426-3037 or shellyvolsche@boisestate.edu, or the Co-Investigator, Sydney Schultz: 832-623-9249 or sydneyschultz441@boisestate.edu

This study has been reviewed and approved by the Boise State University IRB (IRB). If you have questions about your rights as a research participant, you may contact the IRB, which is concerned with the protection of volunteers in research projects. You may reach the board through the Office of Research Compliance by calling (208) 426-5401 or emailing humansubjects@boisestate.edu.

CONSENT

Please acknowledge your understanding of the above and confirm that you would like to continue with the survey.

I have read the above information and

- YES**, I would like to continue with the survey.
- NO**, I prefer NOT to participate at this time.

APPENDIX B

Questions for K9 Officers

Questions for K9 Officers

MODIFIED LAPS QUESTIONS

Modeled off of questions from: Johnson, T. P., Garrity, T. F., & Stallones, L. (1992). Psychometric evaluation of the Lexington attachment to pets scale (laps). *Anthrozoös*, 5(3), 160–175. <https://doi.org/10.2752/089279392787011395>

All questions will be measured on a 4-point Likert scale

1 = strongly disagree

2 = disagree

3 = agree

4 = strongly agree

- a) My K9 means more to me than any of my coworkers
- b) Quite often I confide in my K9
- c) I believe that K9s should have the same rights and privileges as human officers
- d) I believe that my K9 is my best friend
- e) Quite often, my feelings toward people are affected by the way they react to my K9
- f) I love my K9 because they are more loyal to me than most of the people in my life
- g) I enjoy showing other people pictures of my K9
- h) I think my K9 is just a dog
- i) I love my K9 because they never judge me
- j) My K9 knows when I'm feeling bad
- k) I often talk to other people about my K9
- l) My K9 understands me
- m) I believe that loving my K9 helps me stay healthy
- n) K9s deserve as much respect as human officers do
- o) My K9 and I have a very close relationship
- p) I would do almost anything to take care of my K9
- q) I play with my K9 quite often
- r) I consider my K9 to be a great companion
- s) My K9 makes me feel happy
- t) I feel that my K9 is a part of my family
- u) I am not very attached to my K9
- v) Having my K9 adds to my happiness
- w) I consider my K9 to be a friend

PERCEIVED STRESS SCALE QUESTIONS

From: Cohen, S., Kamarch, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24, 385e396.

“The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate by circling how often you felt or thought a certain way.”

0 = Never, 1 = Almost Never, 2 = Sometimes, 3 = Fairly Often, 4 = Very Often

Questions:

1. In the last month, how often have you been upset because of something that happened unexpectedly?
2. In the last month, how often have you felt that you were unable to control the important things in your life?
3. In the last month, how often have you felt nervous and “stressed”?
4. In the last month, how often have you felt confident about your ability to handle your personal problems?
5. In the last month, how often have you felt that things were going your way?
6. In the last month, how often have you found that you could not cope with all the things you had to do?
7. In the last month, how often have you been able to control irritations in your life?
8. In the last month, how often have you felt that you were on top of things?
9. In the last month, how often have you been angered because of things that were outside your control?
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

Demographics Questions

General Demographics Questions

What is your current age?

- a. 18-24
- b. 25-35
- c. 36-45
- d. 46-60
- e. 60+

What is your biological sex?

- a. Male
- b. Female
- c. Other
 - a. Specify if comfortable
- d. Prefer not to say

What is your highest level of education?

- a. Elementary school or similar
- b. Vocational degree
- c. High school
- d. Undergraduate degree
- e. Graduate degree
- f. Doctoral degree

What is your yearly income?

- a. \$0 – \$10,000
- b. \$10,000 - \$30,000
- c. \$30,000 - \$50,000
- d. \$50,000 - \$70,000
- e. \$70,000 - \$90,000
- f. \$90,000+
- g. Prefer not to disclose

How long have you been working within the field of law enforcement?

- a. 0 – 5 years
- b. 6 – 10 years
- c. 11 – 20 years
- d. 20+ years

What is your rank within your department?

Animal-Related Demographics Questions

Did you grow up with pet dogs in the home?

- a. Yes
- b. No

Did you grow up with any other types of pets in the home?

- a. Yes
 - a. If yes, please provide species, number, etc.
- b. No

Excluding your K9, how many dogs do you currently have in the home?

How many other types of animals do you currently have in the home? If yes to having any other type of animal, please provide species, number, etc.

Where does your pet usually sleep?

- a. In my bed
- b. In their own bed, but in my room
- c. In their own bed in a different room
- d. On the furniture in a different room
- e. In another member of the household's bed
- f. In a crate
- g. Outside
- h. Other/combination of previous options
 - a. Please specify

What do you feed your pet as their daily diet?

- a. An average commercial diet
- b. A high end commercial diet
- c. A special, veterinarian diet
- d. I cook/prepare food for my pet
- e. I feed my pet leftovers from family meals
- f. Raw food
- g. Combination of raw food and commercial dry food
- h. Other
 - a. Please specify

How long do you play with your pet(s) per day?

K9 – Related Demographics Questions

What is your K9's name?

What breed is your K9?

How long have you been working with your current K9?

Where does your K9 live?

How did you get your K9? Where did you get them?

Did you train your K9, or did someone else?

Is this your first K9?

APPENDIX C

Questions for Non-K9 Officers

Questions for Non-K9 Officers

Officer Perspectives on K9s

All questions will be measured on a 4-point Likert scale

1 = strongly disagree

2 = disagree

3 = agree

4 = strongly agree

- a) Having K9s for officers makes our department better
- b) K9s are valuable members of our teams
- c) K9s deserve as much respect as human officers do
- d) Taking care of a K9 has positive impacts on the officers who have them
- e) K9s have no impact on the success of our department
- f) I believe that K9s should have the same rights and privileges as human officers
- g) I would consider working with a K9 at some point in my law enforcement career
- h) I enjoy hearing about the work that K9s do to assist our department

PERCEIVED STRESS SCALE QUESTIONS

From: Cohen, S., Kamarch, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24, 385e396.

“The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate by circling how often you felt or thought a certain way.”

0 = Never, 1 = Almost Never, 2 = Sometimes, 3 = Fairly Often, 4 = Very Often

Questions:

11. In the last month, how often have you been upset because of something that happened unexpectedly?
12. In the last month, how often have you felt that you were unable to control the important things in your life?
13. In the last month, how often have you felt nervous and “stressed”?
14. In the last month, how often have you felt confident about your ability to handle your personal problems?
15. In the last month, how often have you felt that things were going your way?
16. In the last month, how often have you found that you could not cope with all the things you had to do?
17. In the last month, how often have you been able to control irritations in your life?
18. In the last month, how often have you felt that you were on top of things?
19. In the last month, how often have you been angered because of things that were outside your control?

20. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

Demographics Questions

General Demographics Questions

What is your current age?

- f. 18-24
- g. 25-35
- h. 36-45
- i. 46-60
- j. 60+

What is your biological sex?

- e. Male
- f. Female
- g. Other
 - a. Specify if comfortable
- h. Prefer not to say

What is your highest level of education?

- g. Elementary school or similar
- h. Vocational degree
- i. High school
- j. Undergraduate degree
- k. Graduate degree
- l. Doctoral degree

What is your yearly income?

- h. \$0 – \$10,000
- i. \$10,000 - \$30,000
- j. \$30,000 - \$50,000
- k. \$50,000 - \$70,000
- l. \$70,000 - \$90,000
- m. \$90,000+
- n. Prefer not to disclose

How long have you been working within the field of law enforcement?

- e. 0 – 5 years
- f. 6 – 10 years
- g. 11 – 20 years
- h. 20+ years

What is your rank within your department?

Have you previously had a K9?

- a. Yes
- b. No

Animal-Related Demographics Questions

Did you grow up with pet dogs in the home?

- c. Yes
- d. No

Did you grow up with any other types of pets in the home?

- c. Yes
 - a. If yes, please provide species, number, etc.
- d. No

How many dogs do you currently have in the home?

How many other types of animals do you currently have in the home? If yes to having any other type of animal, please provide species, number, etc.

Where does your pet usually sleep?

- i. In my bed
- j. In their own bed, but in my room
- k. In their own bed in a different room
- l. On the furniture in a different room
- m. In another member of the household's bed
- n. In a crate
- o. Outside
- p. Other/combination of previous options
 - a. Please specify

What do you feed your pet as their daily diet?

- i. An average commercial diet
- j. A high end commercial diet
- k. A special, veterinarian diet
- l. I cook/prepare food for my pet
- m. I feed my pet leftovers from family meals
- n. Raw food
- o. Combination of raw food and commercial dry food
- p. Other
 - a. Please specify

How long do you play with your pet(s) per day?