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Effect of Human-Animal Interactions on Retail Employees' Job Satisfaction and Job Performance

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Abstract

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MEd, University of Toledo, 1996

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Research has shown that companion animals can have a positive effect on people who suffer from mental and physical illnesses; however, few studies have considered the impact of human-animal interactions (HAIs) on employees in the work environment. This quantitative study investigated the effect of HAIs on 146 employees' job satisfaction and job performance in three retail environments with a range of potential animal interactions: retail store with no animal presence (none), retail store with occasional animal presence (occasional), and retail store with persistent animal presence (constant). Retail employees' job satisfaction and performance in each retail setting were assessed using the Daily Job Satisfaction Scale (DJSS) and the Job Performance Measure (JPM), respectively. Data were analyzed using a MANOVA and one-way ANOVAs to determine if employees' job satisfaction and job performance were significantly different based on the level of HAIs in the three retail environments. Analysis of the DJSS and JPM composite scores for retail workers at three retail sites indicated that the job satisfaction and job performance scores were dependent on the HAI level of animal presence. Composite scores for the DJSS and the JPM were higher in pet stores with constant animal presence than those with occasional and no animal presence. The results may compel leaders and their organizations to promote employee wellness by permitting HAIs in the workplace. Such a policy shift would foster positive social change for workers and their organizations as well as their customers in terms of improved employee mental and physical health, enhanced interpersonal relationships, and reduced absenteeism and turnover rates.

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Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

The popularity of pet ownership has increased because of the attention from mainstream media (R. T. Barker, 2005). According to the American Pet Products Association (2011a, 2011b), in 2011, 33% of U.S. households owned cats; 39% owned dogs; 2% owned horses; and others owned a variety of amphibians, birds, and reptiles. People sometimes use animals to fill certain roles in their lives (R. T. Barker, 2005), including making them part of the family and giving them human attributes (Fine & Eisen, 2008). Katz (2003) suggested that people sometimes bond with animals more than they do with other human beings. Wilkin et al. (2016) reported that at least one pet is an important part of the North American family unit. For other individuals, animals can represent something warm and loving to come home to (R. T. Barker, 2005).

Konrad Lorenz, Boris Levinson, and Leo Bustad are considered pioneers in identifying the association between humans and animals (Fine & Beck, 2015). Lorenz was a famous ethnologist, and Levinson was a psychotherapist who was one of the first to use animals in therapy, a protocol known as animal-assisted therapy (AAT). Bustad (1983) stated that the human-animal bond is one of the most profound forms of friendship and love. Beck (1999) asserted that animals and humans alike seem to benefit from this bond.

Friedmann et al. (1980) were among the first researchers to study the health benefits to patients of animal exposure. They studied heart patients for a year after hospital discharge. The positive patient health benefits of pet interactions that they reported piqued the interest of other researchers to study human-animal interactions

(HAIs). Levinson (1968), for example, used animals in a therapeutic setting. Levinson, who realized that animals could enhance the therapist-client relationship, also was one of the first researchers to work with animals in a treatment setting. This interaction was discovered by accident when Levinson noticed that a child would not interact with him, but would pay attention to his dog, Jingles. Levinson then decided to try this human-dog interaction with other clients.

The American Veterinary Medical Association (AVMA, 1998) discussed the relationship between animals and people, also known as the human-animal bond (HAB), focusing on the emotional, physical, and psychological health benefits to humans and animals. Creagan (2002), who described the body-mind connection between humans and animals, contended that pet interactions can help human beings to benefit from a body-mind balance. Fine (2010), as well as Fine and Eisen (2008), added that pets give human beings a sense of hope, something that might help people to find life more worth living.

Researchers have been calling for more investigations on the topic of assistance-animal interventions (AAIs; Nimer & Lundahl, 2007). Green (2012) called for future investigations into practical uses for field advancement. One target population receiving little attention from researchers on the benefits of animal interventions have been employees in the workplace. Edwards et al. (2014) conducted one of the few studies on animal interventions with patients who had dementia that also measured staff satisfaction based on workers' and patients' exposure to fish in an aquarium for a 2-week period. Staff reported an increase in empowerment based on animal exposure; patients' behavior

also improved. More research is needed in other workplace environments to determine if HAIs can increase employees' wellness (R. T. Barker, 2005).

Chapter 1 explores the background of AAIs and the ways that they have been used in various venues. Researchers have studied the ways that animals have been used in different venues to obtain positive health effects, but little is known if these enhancements can be attained or transferred to the work environment. Companies are looking for ways to enhance the work experience, so this study sought to determine whether HAIs in the workplace might help to achieve this outcome.

The research was designed to be conducted in three retail settings: no animal presence (none), occasional animal presence (occasional), and persistent animal presence (constant) to measure the effects of HAIs on workers' job satisfaction and job performance. The study was guided by three research questions (RQs) and hypotheses. The independent variable (IV) was level of HAIs, and the dependent variables (DVs) were retail workers' job performance and job satisfaction. The theoretical foundation HAB was used to explain the human-animal connection. The significance of the study highlights the value of positive HAIs in the workplace, particularly in terms of workers' job performance and job satisfaction. Two data collection techniques were used. The primary method was delivery of the instruments online via SurveyMonkey, but when it was determined that the number of targeted retail participants from the site with animal presence was insufficient, a direct data collection technique was used. Data analysis on research questions required one-way ANOVAs and one-way MANOVA's and the appropriate post hoc tests.

Background

Beck (2002) stressed the benefits of pet ownership, including decreasing loneliness and increasing the likelihood of interactions with other pet owners. Many venues, including hospitals, counseling offices, and nursing homes, have allowed therapy animals on site because they enhance human health (e.g., Boyd, 2016; Fine, 2010; Johnson, 2008; Kelly & Cozzolino, 2015). Positive HAIs in hospital and other clinical settings have shown promise, but because they are relatively new interventions, the empirical evidence to build credibility with the scientific community has been limited (Boyd, 2016). The literature review in Chapter 2 provides in-depth coverage of the research showing the positive effects that animals can provide.

Fine (2010) described AAI as "any intervention that intentionally includes or incorporates animals as part of a therapeutic or ameliorative process or milieu" (p. 36) and AAT as "a goal-directed intervention in which an animal that meets specific criteria is an integral part of the treatment process" (p. 36). AAT is delivered by health service professionals with specialized expertise. AAI has been shown to promote well-being, including lowering blood pressure, reducing pain, and decreasing anxiety and depression (Boyd, 2016). Johnson (2008) reported that cancer patients were less anxious because of what Johnson described as dog visits. When the patients were visited by their dogs, they reported feeling distracted from the difficult treatments that they were undergoing. Kelly and Cozzolino (2015) found that the use of AAT helped at-risk children to overcome trauma.

Similarly, AAT has been used in the treatment of a variety of psychological conditions, including the substance abuse issues of at-risk youth and other psychological traumas (Kelly & Cozzolino, 2015). Therapists have reported improved outcomes for patients when animals have been used as part of therapeutic interventions (Zilcha-Mano et al., 2011). Therapy dog owners have been known to experience reduced levels of stress (S. B. Barker et al., 2010). Further, equine-assisted therapy and activities, that is, the use of interactions with horses, have been identified as demonstrating some improvement among patients dealing with substance abuse; however, this research has been limited (Cody et al., 2011). Finally, even individuals who are incarcerated have experienced the healing power of animals when they have trained rescued shelter dogs for war veterans (Furst, 2016).

The workplace environment also has been challenged to find ways to improve employees' wellness and their work-life balance (Wilkin et al., 2016). Although small companies were the first to embrace the pet-friendly workplace (Norling & Keeling, 2010), larger companies such as Ben & Jerry's, Google, and Zynga also have begun to support this practice. However, the practice of allowing HAIs in the workplace has been limited, and empirical evidence in the business community has been lacking (Knisely et al., 2012).

Some companies have explored the effects of HAIs on reducing workers' levels of stress (Finkbeiner et al., 2016). Two studies used computer representations of animals. In the first study, Finkbeiner et al. (2016) developed creative methods for the participants (i.e., college students) to interact with computer-based animal programs to alleviate

stress. Participants reported a decrease in stress when allowed to watch a video of a dog during their simulated break. In the second study, an Australian company allowed workers to interact online with rescue dogs (Cheklin et al., 2016). The goal of this study was to allow workers to interact with animals remotely to receive the benefits of the interaction while minimizing the disrupting effects of live animals in the workplace. Results indicated a decrease in workers' stress by allowing them to interact in a nurturing play system with the rescue animals via computer. Understanding the reasons for the effectiveness of AAT or AAI in the workplace demands more research (Zilcha-Mano et al., 2011).

Problem Statement

Current research on allowing animals in the workplace has included studies on employees with disabilities. Glenn (2013) concluded that individuals with disabilities benefit from successful partnerships with service dogs. The Americans with Disabilities Act (ADA) protects these workers' legal rights, but research on the benefits of animal-worker interactions with individuals with disabilities in the workplace has been limited (Glenn, 2013).

R. T. Barker et al. (2012) found that workers' levels of stress decreased when they had their pets with them in the workplace. In an older study, Wells and Perrine (2001) surveyed 193 employees of 31 employers who allowed pets in the workplace. The workers reported that the pets provided companionship and a pleasant diversion from work. Von Bergen and Bressler (2015) clarified the terms relevant to allowing animals in the workplace for employers facing legal concerns. A law firm reported that pets

improved employees' moods and lowered blood pressure levels (D. L. Cohen & Davis, 2012). The animals not only had a positive effect on employees' health but also reduced absenteeism and employee turnover.

Research has been limited on the specific impact of HAIs on employees' job satisfaction or performance. To date, no research has considered the effect of HAIs on the job performance and satisfaction of employees in the retail environment. Consequently, research was needed to evaluate the impact of animals in the retail environment on employees' job satisfaction and job performance.

Purpose Statement

The purpose of this study was to measure the effect of HAIs on the job performance and job satisfaction of employees in the retail environment. The goal was to determine whether the positive effects of HAIs identified in therapeutic settings translate into positive employee outcomes in terms of job satisfaction and job performance in the retail setting.

Research Questions and Hypotheses

RQ1: How does the relationship between employee job satisfaction and job performance differ in retail environments with varied levels of HAIs?

H_{01}: The relationship between employee job satisfaction, as measured by the Daily Job Satisfaction Scale (DJSS), and job performance, as measured by the Job Performance Measure (JPM), in retail environments with varied levels of HAIs (none, occasional, and constant) does not differ.

H_{a1}: The relationship between employee job satisfaction, as measured by the DJSS, and job performance, as measured by the JPM, in retail environments with varied levels of HAIs (none, occasional, and constant) differs.

RQ2: How does the level of HAIs at work influence the job satisfaction of employees in a retail environment?

H_{02}: The level of HAIs at work (none, occasional, and constant) does not influence the job satisfaction of employees, as measured by the DJSS, in a retail environment.

H_{a2}: The level of HAIs at work (none, occasional, and constant) influences the job satisfaction of employees, as measured by the DJSS, in a retail environment.

RQ3: How does the level of HAIs at work influence the job performance of employees in a retail environment?

H_{03}: The level of HAIs at work (none, occasional, and constant) does not influence the job performance of employees, as measured by the JPM, in a retail environment.

H_{a3}: The level of HAIs at work (none, occasional, and constant) influences the job performance of employees, as measured by the JPM, in a retail environment.

Theoretical Foundation

This study was built on the theoretical foundation of HAB (Turner, 2007). This bond has been studied since animals were first domesticated (Turner, 2007). In particular, dogs have been used in many ways that reflect this bond, including herding, hunting, and

guarding (Clutton-Brock, 1995). Horowitz (2009) asserted that dogs can even read emotions in the human face to be reassured about their actions.

Bustad (1983) described this bond as similar to the human need for love and friendship. Beck (1999) compared this bond to the similar bond that children have with their parents. Fine and Beck (2015) expanded on the term "bonding" to identify relationships seen in the animal world. They noted that some of the same bonding that occurs between human parents and children or human husbands and wives can be seen in animal species as bonding-like behaviors. The AVMA (1998) also discussed this phenomenon and found that bonding is beneficial not only to human beings but also to animals.

Fine and Beck (2015) studied the bond between human beings and animals from the pet perspective and concluded that pets have the ability to fill a void in many human beings' lives. Beck (2002) pointed out that loving animals greet their owners and can provide such benefits as decreasing loneliness and stimulating verbal communication. Caring for animals gives human beings the opportunity to engage in important nurturing activities. Simply touching animals can help to stimulate human healing sensations (Sehr et al., 2013). Creagan (2002), a professor of medical oncology at the Mayo Clinic, believed that pets can help to balance the human mind and body. Fine (2006) and Fine and Eisen (2008) added that pets can help human beings to connect to the outside world by fostering hope and giving them a reason to live.

Significance

Professional counselors have used pets as therapeutic adjuncts to enhance therapeutic results. Corson and his wife recorded some of the first empirical research on canine-assisted therapy and psychiatric patients in the 1970s (Corson et al., 1975). Corson et al. (1975) concluded that dogs helped the patients to become more effective communicators. These results and others have challenged researchers to look beyond the home and therapeutic settings (Fine et al., 2015). If animals can have a positive effect on human beings in the home or therapeutic settings, one might ask whether that effect also can occur in the workplace.

R. T. Barker (2005) called for more research to determine whether HAB has benefits in the business environment. Many companies are searching for ways to reduce employees' levels of stress and improve their morale. According to Olsen (2015), stressed workers tend to have increased levels of absenteeism and turnover. Both outcomes can cost companies billions of dollars in profit (Kudesia, 2010).

The study explored the significance of HAIs on the job performance and job satisfaction of employees in the retail environment. Locke (1976) defined job satisfaction as positive work experiences; Weiss (2002) described it as workers' judgments about their jobs. Some aspects of the workplace, such as mutual trust and respect, can increase job satisfaction (Kennerly, 1989). Billingsley and Cross (1992) concluded that employees with high job satisfaction are less likely to quit. R. T. Barker et al. (2012) suggested that HAIs offer increased interpersonal interactions at low cost and might even increase organizational satisfaction.

Thriving in the workplace is a positive psychological state relevant to workers' energy and willingness to learn (Spreitzer et al., 2005). Workplace environments that capture workers' energy and willingness to learn result in positive job performance (Spreitzer et al., 2012). Leaders in the field of positive psychology have discussed ways to improve job performance (Iverson, 2016). Individuals who have hope are better goal setters and are self-motivated. Seligman (1998) concluded that workers' optimism in achieving meaningful lives can lead to a flourishing workplace environment.

Fine et al. (2015) challenged individuals to be forward thinkers. Fine et al. concluded that visionaries look at extant information and contemplate the future. AAI researchers have challenged other researchers to incorporate study results in their field to new venues. To date, no other researchers have investigated the relationship between animal-friendly versus nonanimal retail environments to measure the effect on employees' job performance and job satisfaction. This research gathered information on retail workers' job performance and job satisfaction in an animal-friendly versus a nonanimal retail environment to determine the impact.

Nature of the Study

A quantitative study was conducted in three retail environments to study the effect of HAIs on employees' job satisfaction and job performance. One retail store environment had no HAIs, one had occasional HAIs because of its pet-friendly policies, and one had constant HAIs. Participants were screened regarding their retail store environment and the extent of HAI on the job to establish the three groups for comparison. The IV was level of HAIs in the retail setting: none, occasional, or constant.

The DVs were employees' job satisfaction and job performance, which were assessed using nine items from the DJSS (Loi et al., 2009) and the JPM (Onwezen et al., 2014), respectively.

A sample of convenience was used, with the participants working at one of three types of retail environments: One retail environment had a policy of no animals permitted (none), one had a pet-friendly policy (occasional), and one allowed animals on site because of its product line (constant). Participants were obtained from a target population of retail workers in the local community. Flyers were posted on the retail community workboard with retail decision makers' approval. These flyers included pertinent information about the study, including the researcher's credentials and Walden University contact information.

The study also was posted on the Walden University Participant Pool site by Walden University's Institutional Review Board (IRB). This site gave access to interested participants who were attending Walden University at the time of the study. The participants were contacted by the university's IRB to participate in ongoing studies for class credit or stipend. Data then were collected from the sample of direct retail employees. Besides being asked about the nature of their work environment and interaction with animals on the job, participants were asked to complete the two surveys about their present job satisfaction and job performance.

Social media sites such as Survey Circle, Facebook, and Linked In were used to guide interested individuals to the SurveyMonkey site. This site also included all pertinent information about the study, the researcher's credentials, Walden University

contact information, and a consent form. The participants who verbally consented to complete the survey were then given access to the survey questions. The researcher then logged these results into the SurveyMonkey website. Some participants chose to go directly to the SurveyMonkey site in front of researcher on their mobile devices or computers. A small stipend was given to select individuals in the retail setting who were willing to respond. Other variables describing the sample were recorded to include age, gender, race, time/position with company, highest level of education, and retail employment status of their current positions. Near the end of data collection, the data that had been collected from retail settings with animals present constantly proved to be insufficient, so a second direct retail participant data collection technique was used. This protocol involved getting retail decision makers' approval and then asking the participants to fill out the survey in the retail setting.

The ethical research protocol of Walden University's IRB was followed to explain the researcher's professional and academic credentials, the significance and purpose of the research, and the risks and benefits of participation. It also entailed obtaining written consent from the participants, being open about data collection, and not using deception or manipulation to recruit participants. All participants were given access to the study results.

Definitions of Terms

Animal-assisted intervention (AAI): Interaction between animals and human beings (Fine, 2015).

Animal-assisted therapy (AAT): A type of therapy involving animals that have been trained to enhance the emotional, physical, and social well-being of clients. The individuals conducting this type of therapy are trained professionals (Fine, 2015).

Human-animal bond (HAB): A relationship that individuals have with domesticated animals (Turner, 2007).

Pet-friendly workplaces: Workplaces that are sensitive to pet ownership and allow employees to bring their pets to work (Wilkin et al., 2016).

Assumptions

1. Participants were able to read and answer the survey items.
2. Participants provided honest responses to the survey items.
3. The surveys accurately measured the participants' attitudes or the study variables.
4. Data collection followed Walden University's IRB procedures and guidelines.

Limitations

1. Participants at the time of the study were employees working in one of three retail environments.
2. Data were collected primarily electronically using SurveyMonkey. To ensure that the desired sample size was obtained, the researcher did collect part of the sample directly using a paper instrument.
3. Surveys are self-report measurements, so the responses could have been deceptive.

4. Participants might have not provided truthful answers because of fear of retaliation from their employers.
5. Responses from the sample of convenience might not be generalize to other target populations.
6. Responses from the retail environment may or may not have included surveys from specific named companies.

Scope

The current study was limited to workers in three retail environments: "none" did not encompass HAIs, "occasional" involved occasional HAIs because of pet-friendly policies, and "constant" involved persistent HAIs because of its product line. The problem of determining whether HAIs in the retail environment can improve the job performance and satisfaction of employees had not been studied previously. Comparing the job performance and job satisfaction of employees in three distinct retail environments with varied levels of human animal interaction should help to close this gap in the literature.

Summary and Transition

Chapter 1 presented background information about AAI, AAT, and HAIs, along with their use as well as impact in different venues. The problem is that much is still unknown about the ways in which AAI, AAT, and HAIs can be used in or transferred to the work environment to improve employees' job satisfaction and job performance. Chapter 2 explains the literature search strategy, discusses HAIs and the venues that have been used in research, and highlights the lack of information on AAI in the workplace.

Chapter 3 provides details about the research methods and design of this quantitative study. Also explained are the recruitment of the participants and details about the data collection and analysis procedures.

Chapter 4 presents demographic data about the sample, descriptive statistics, and some correlations of interest. It then covers the tests of assumption for the statistic used and the results for the three RQs and associated hypotheses. Chapter 5 provides an interpretation of study findings. Study limitations, recommendations for future research, implications for social change, and a conclusion are included in this final chapter.

Chapter 2: Literature Review

Overview

Chapter 2 covers historical and theoretical background information on HAIs, followed by a discussion of the theory of HAIs known as HAB. The chapter includes details about research of venues where HAIs have occurred. Most of the research on HAIs has focused on AAT, pet therapy, or dog therapy. The chapter provides an explanation of the strategy used to find relevant literature on HAIs and a discussion of the limited research on HAIs in the workplace. Chapter 2 closes with a discussion of the ways that the study can contribute to the current body of knowledge on HAIs and the workplace.

Literature Search Strategy

The search of the literature was conducted using Academic Search Complete, PsycINFO, PsycARTICLES, PsycBOOKS, PsycCRITIQUES, PsycEXTRA, PsycTESTS, Mental Measurements Yearbook with Tests, eBook Collection (EBSCOhost), ERIC, Business Source Complete, and Google Scholar. Relevant search terms words were *animal therapy and job*, *animal-assisted therapy and job*, *animal-assisted therapy and workplace*, and *pets in the workplace*. These searches helped to identify the research gap on HAIs and the workplace. Broader searches using the keywords *animal therapy*, *animal intervention*, and *human-animal intervention* helped the researcher to find venues where animals have been accepted, namely, therapy settings, nursing homes, and animal/service assistance. Specific journals such as *Anthrozoős* contained copious research involving the use of animals in various venues.

Most of the research has been published within the past 10 to 15 years, pointing to the paucity of earlier research on the use of animals and HAIs, especially in the workplace. Some older articles were included as foundational research of HAB and the various venues that have accepted the presence of animals (e.g., hospitals, nursing homes, therapeutic settings, and schools). The research gap uncovered in this study focused on the workplace. This venue had the least research available on HAIs. The human aspect of the interactions focused on workers. Key search strategies focused on the workplace variables of job satisfaction, job performance, job attitudes, job motivation, and job commitment. The DVs of job satisfaction and job performance were in three retail environments, identified as no HAIs (none), occasional HAIs (occasional), and persistent HAIs (constant).

Human-Animal Bond Theory

HAB refers to the connection that human beings form with animals (Fine & Beck, 2015). Turner (2007) asserted that this bond extends back to the early domestication of animals. Robinson (1995) described HAIs as an opportunity for each species to understand the other rather than serve as the foundation of economic need.

Bustad (1983) stated that HAB mirrors the feelings of love and friendship experienced between human beings. As mentioned in Chapter 1, Fine and Beck (2015) asserted that Bustad, Levinson, and Lorenz coined the term HAB. Barba (1995) and Beck (1999) added that the term "bond" was used to reflect the same interactions between parents and children. Children must rely on parents for protection and nutrition, and

animals, like children, also depend on human beings for their care and protection from danger.

H. Davis and Balfour (1992) asserted that HAB has never been defined clearly, and Bayne (2002) agreed. Researchers such as Tannenbaum (1995) have stated that the relationship between humans and animals must be continuous, voluntary, and reciprocal. Russow (2002) added that the owner-pet relationship must be mutual and persistent. Russow also suggested that animals must learn to trust the people who take care of their needs. Beck (1999) added the relationship should have a mutual increase in well-being for pets and owners.

The notion of HAB was evident in the military dating back to the days of the Roman army (Roth, 2009). Dogs were used by the military in 1919 at St. Elizabeth's Hospital in Washington, DC, to interact with psychiatric patients (Velde et al., 2005). The treatment facility used dogs to interact with veterans who had been traumatized emotionally by their war experiences. The first official use of HAB occurred in Dundee, Scotland, in 1979 by the Group for the Study of Human-Companion Animal Bond (Fine, 2015).

The AVMA (1998) defined HAB as the following:

> A mutually beneficial and dynamic relationship between people and their animals that is influenced by behaviors that are essential to the health and well-being of both. This includes, but is not limited to, emotional, psychological, and physical interactions of people, other animals, and the environment. (p. 1675)

R. T. Barker (2005) considered countries that have such a prevalent HAB as being stronger economically. Countries such as the United States and England, for example, have stronger bonds with companion animals than less prosperous countries do. Nolen (2003) asserted that people who connect with animals also see the beauty in them and consider them sacred. In many Western European countries, animals even accompany their owners to shops and restaurants.

Human-Animal Interactions

Animals have been used in various AAT, AAI, and animal-assisted activities, as well as in the capacity as support and therapy assistance animals (Beck, 2002). For example, some initial research was conducted by Friedmann et al. (1980) with patients from a coronary care unit who were evaluated 12 months following discharge. Some patients were pet owners; others were not. Pets can help owners to increase their levels of exercise, decrease anxiety and depression, and decrease loneliness. The patients who were pet owners were more likely to live longer than patients who were not pet owners.

Patronek and Glickman (1993) suggested that caring for pets may be a protective influence against stress. Companion animals might help to reduce levels of stress and improve the mental health of their owners (Friedmann, 1995). Friedmann and Thomas (1995) researched AAT with a sample of survivors of myocardial infarction. They assigned a severity rating to each participant's disease. They found that owner survival was enhanced by pet ownership. Pet ownership even outscored other areas of social support, including marital status and living arrangements.

Anderson et al. (1992) conducted a large study in Australia to evaluate patients with cardiovascular disease. Some of the patients were pet owners; others were not. They surveyed 5,741 male and female participants for such risk factors as blood pressure, cholesterol, and triglyceride levels. Anderson et al. found that the male pet owners showed a decrease in systolic blood pressure and triglycerides and that their cholesterol levels dropped by 2%; female pet owners over the age of 40 years had reductions in systolic blood pressure and triglycerides.

The Mayo Clinic supported the effects of AAT after Creagan et al. (2015) witnessed the stabilization of a patient with pneumonia, hepatic and renal failure, and metastatic non-small-cell lung cancer because the patient wanted to get home to see the family dog, Max. Creagan et al. concluded that animals might be useful in augmenting traditional medical treatment.

Researchers such as Odendaal (2000) have called for more scientific research on AAT to gain support from the medical community. Odendaal measured six neurochemicals affiliated with decreased blood pressure before and after the participants interacted with the dogs. The participants in Odendaal's study had decreased levels of mean arterial blood pressure after interacting with dogs. Odendaal used baseline versus post interaction values, book reading versus interactions with dogs, and interactions of people with unfamiliar dogs versus dog owners as the control group.

Stevens (2017) investigated a dog visitation program introduced to trauma patients recovering from joint replacement surgery. Satisfaction with the trauma service

was measured on 150 in-patients. Stevens determined that patient satisfaction scores were higher for those receiving dog visits than for those not receiving dog visits.

Mental Health

Berget et al. (2008) used AAT with individuals experiencing psychiatric disorders. The variables of self-efficacy, coping ability, and quality of life were studied. Self-efficacy was measured using the Generalized Self-Efficacy Scale. Coping was measured with the Strategies Scale of the Pressure Management Indicator (Cooper et al., 1988, 1996). Quality of life was measured using a Norwegian version containing 16 items and comparing relations with work, leisure, and other humans (Wahl et al., 1998).

Berget et al. (2007) expanded on the use of AAT with cats or dogs, meaning that the patients interacted with either a cat or a dog. Ninety patients with schizophrenia, anxiety, and affective and personality disorders completed these research inventories at pre- and posttreatment, as well as 6 months later. A final questionnaire captured the participants' experience with the intervention. Self-efficacy scores showed significant increases versus control during preintervention to 6 months and during intervention end to follow up. There were significant increases in coping ability versus control pretreatment and follow up (Berget et al., 2007).

Hoffman et al. (2009) explored AAT and anxiety in patients who had been hospitalized for major depression. The researchers used the State-Trait Anxiety Inventory to measure patients' anxiety at baseline and again after they had interacted with a dog. Mean Beck Depression Inventory scores also were measured on the patients at baseline.

Patients' depression scores were low, perhaps because of the lack of self-reporting. After the AAT session, stress was significantly reduced in the patients (Hoffman, et al., 2009).

Folse et al. (2015) researched the impact of AAT on depression among college students. Forty-four students with self-reported depression were divided into three groups. One group received AAT in conjunction with psychotherapy, one group received AAT only, and one group was the control. The mean score for the group receiving AAT only ($M = 5.67$) was significantly lower than for the control group ($M = 10.18$). These results indicated that AAT reduced depression in the two treatment groups versus the control group (Folse et al., 2015).

Walsh and Mertin (1994) studied eight incarcerated women to determine the impact of training therapy dogs on their self-esteem and levels of depression. The Pets as Therapy (PAT) program tasked these women with training the dogs for individuals who were elderly as well as for individuals with disabilities. Walsh and Mertin administered the Coppersmith Self-Esteem Inventory and the IPAT Depression Scale to the women pre- and posttraining of the therapy dogs. The PAT program was shown to have a positive effect on their self-esteem and reduced their depression (Walsh & Mertin, 1994).

Stefanini et al. (2015) used AAT with adolescents who had acute mental disorders. Thirty-four patients ranging in age from 11 to 17 years interacted with dogs in weekly sessions for 3 months. This randomized, controlled trial showed statistically significant improvement in the Children's Global Assessment Scale, which measures global functioning in children and adolescents (6-17 years of age) and gives a rating from 0 to 100. School attendance also improved (Stefanini et al., 2015).

In 2011, O'Callaghan and Chandler were still referring to AAT as a relatively new therapeutic application in counseling. They distributed a survey to mental health professions who had integrated AAT into their practices. Results of the exploratory study found that the mental health professionals were using AAT in 18 different techniques and 10 interventions (O'Callaghan & Chandler, 2011).

Gonzalez-Ramirez et al. (2013) compared AAT to cognitive-behavioral therapy (CBT) using a dog as the therapy animal. One group used AAT and CBT, and the other group used CBT only. Participants reported reduced stress levels and adherence to treatment with dog-assisted therapy versus CBT alone (Gonzalez-Ramirez et al., 2013).

Nursing Homes

Colombo et al. (2005) used pet therapy with 144 patients in a nursing home to compare three groups of participants: One group looked after a canary, one group cared for a plant, and one group served as the control. This 3-month study measured cognitive status using the Mini Mental State Examination, subjective quality of life with LEIPAD II Short Version, and the Brief Symptom Inventory. The plant therapy group showed improvement, but not as much as the pet therapy group, in decreased levels of patient depression and increased perceptions about quality of life (Colombo et al., 2005).

In a nursing home study, AAT was used three times a week for 90 minutes by Vrbanac et al. (2013). They conducted a 6-month study to evaluate the value of dog companionship with 21 residents whose mean age was 80 years. The UCLA Scale of Loneliness measured the residents' perceptions of loneliness. Results showed that the program reduced the participants' perceptions of loneliness (Vrbanac et al., 2013).

Children

Braun et al. (2009) researched pain in children using AAT. Their quasi-experimental intervention design found that children experienced significant pain reduction with AAT versus the control group. The children ranged in age from 3 to 17 years and were assessed used the Wong-Baker FACES Pain Scale. None of the children was fearful of or allergic to dogs (Braun et al., 2009). Balluerka et al. (2014) studied AAT and attachment dimension with a sample of 46 adolescents in a residential unit who had experienced childhood trauma. The intervention group (25 of the 46 adolescents) used AAT and displayed more secure attachment in the residential treatment facility (Balluerka et al., 2014).

Kaminski et al. (2002) used pet therapy in their study. They had children interact with pets 1 night each week while in the hospital. The 70 hospitalized children reported enhanced mood with pet therapy. The children's heart rate levels increased, and parents' ratings of children's mood also increased. The parents had been asked to evaluate their children's mood based on four criteria: happy, scared, lonely, and relaxed. The parents had rated these four moods using a 5-point scale (Kaminski et al., 2002).

Rabbitt et al. (2014) evaluated AAT, medication, psychotherapy, and "wait and see" in children with disruptive behavior problems (e.g., aggression, oppositional behavior, and impulsivity). The "wait and see" approach allows children to grow out of problems without any treatment modalities. AAT showed a favorable mean acceptability rating to medication and "wait and see," but it lagged slightly behind psychotherapy (Rabbitt et al., 2014).

Calcaterra et al. (2015) found that AAT facilitated faster recovery in postoperative patients. The 40 children in the study, all between the ages of 3 and 17 years, were exposed to dogs after surgery. Results showed that the children had lower pain perceptions and that exposure to dogs helped to increase vigilance and activity after anesthesia (Calcaterra et al., 2015).

Dog-assisted therapy was studied with children in a rehabilitation center in Turkey who were dealing with cerebral palsy (Elmaci & Cevizci, 2015). The therapy dogs helped the children to experience less fear and anxiety. The children also learned to better judge their own ability and capabilities (Elmaci & Cevizci, 2015).

Boyer and Mundschenk (2014) researched social communication with three children ages 3 to 8 years who had language impairments. The children interacted with either a live cat or a toy cat. In two of the three children, interactions with the live cat rather than with the toy cat enhanced their social involvement (Boyer & Mundschenk, 2014).

The interactions of children on the autism spectrum disorder (ASD) have been explored by researchers (e.g., Grandin et al., 2015). Individuals with ASD have challenges relevant to social interaction and communication. O'Haire et al. (2013) found that children with ASD had more peer social interactions when animals, not toys, were present. Grandin and Johnson (2005) hypothesized that individuals with ASD are sensory-based thinkers, similar to animals, who discover their surroundings through smell, sight, and physical sensations.

Military

Animals have been and continue to be used by the military (Chumley, 2012). During World War II, for example, carrier pigeons were used to transport messages. Military working dogs have been trained to detect narcotics and land mines. Even Custer had dogs with him in battle. Animals also have been used to provide comfort to soldiers returning from war (Chumley, 2012).

The U.S. Department of Veterans Affairs (DVA) uses AAI with soldiers who have palliative care issues (Krause-Parello et al., 2018). Palliative care, according to the DVA, is provided to veterans with serious or life-threatening illness (Krause-Parello et al., 2018). Older adults, a category into which many veterans fall, have experienced improved levels of health and well-being when engaged in human-dog attachments (Krause-Parello, 2008).

Krause-Parello et al. (2018) conducted a study with 25 veterans at a VA hospital in Denver, Colorado, to identify stress indicators (i.e., elevated blood pressure; heart rate; and salivary biomarkers [cortisol, alpha-amalase, and immunoglobulin]). They studied AAI by allowing the veterans to interact with the facility's therapy dog. They found that interactions with the therapy dog resulted in significant decreases in heart rate and level of cortisol (Krause-Parello et al., 2018).

Specially trained dogs were deployed to Iraq and Afghanistan (Chumley, 2001). These therapy dogs were later evaluated for their influence on soldiers' stress and resilience levels. The dogs were helping soldiers to trust occupational health medical

professionals by reducing barriers and increasing their comfort in social interactions (Chumley, 2001).

Mueller and Callina (2014) researched the challenges facing youth from military families when parents were deployed. Creative ideas, including animal interactions, were considered for those children as a way of dealing with their parents' absence. The researchers surveyed the HAIs of the children, including what types of animals they had at home. Emotional attachment was measured using the eight-item Companion Bonding Scale (Poresky et al., 1987). The Center for Epidemiological Studies Depression Scale was used to measure depression. Stress was measured using the 11-item Perceived Stress Scale (S. Cohen et al., 1983). Positive youth development (PYD) was measured using the 34-item PYD Short Form (Geldhof et al., 2014). HAIs predicted significant PYD as well as higher adaptive coping strategies. Easterbrook et al. (2013) suggested that sources of strength such as resilience are needed to help these children to deal with the absence of their parents. Mueller and Callina (2014) stated that one source already in the family home, namely, pets, should be considered.

Furst (2016) researched a grassroots program to benefit individuals who were incarcerated or in the military. Individuals who were incarcerated were training dogs as therapeutic canines to help veterans to deal with posttraumatic stress disorder (PTSD). Veterans with PTSD face such challenges as the lack of adequate treatment that results in economic burdens for those individuals and the country. These programs are based on the healing powers of animals. Stern et al. (2013) surveyed 30 U.S. military veterans with PTSD who had canine companions. The surveyed individuals reported that since

adopting their canine companions, they felt calmer, less lonely, less depressed, and less worried (Stern et al., 2013).

Workplace

Fitsgerald and Danner (2012) examined elements of evolutionary psychology on workplace health, happiness, and productivity. They discussed sunlight and green spaces as two factors that could enhance the work environment. Social interactions with animals were the focus of ways to improve workers' physical and psychological health. The health and well-being of workers are at risk because of unhealthy workplaces, so employers might benefit from knowing that they can save money by reducing workers' medical care costs and absenteeism rates (Fitsgerald & Danner, 2012).

Glenn and Thorne (2015) studied the use of service animals in the workplace. They specifically examined the perceptions of service animals by interviewing 30 individuals about the importance of experience with service dogs. The 30 participants had been separated into two groups, with one having experience with dogs for mobility or stability and one group having experience with dogs for medical alerts or responses. The latter group rated coworker preparation and legal knowledge as more important issues than the mobility or stability group did (Glenn & Thorne, 2015).

Glenn (2013) researched elements of successful service dog partnerships in the workplace. Glenn cited the lack of research in the area of employment. The exploratory study uncovered 68 elements that the respondents identified as important for the use of service dogs in the workplace. Examples of these elements included the primary role of

the participant, the primary type of service dog, and the frequency of experience with the service dog (Glenn, 2013).

Workplace stress might be reduced in creative ways, including AAT (Cheklin et al., 2016). Companies have overcome workplace restrictions with live animals by using interactive computer-animal systems that allow workers to access nurturing animal interactions while minimizing disruptions in the workplace. Finkbeiner et al. (2016) used videos to expose their study participants to four conditions: countdown breaks, dog videos, videos of robots, and continuous vigilance. Exposure to videos of dogs decreased the workers' distress. Finkbeiner et al. suggested that this research may support the importance of rest breaks, so they called for future studies, especially on natural stimuli to relieve stress. Researchers such as Berget et al. (2013) have surveyed general practitioners, psychiatrists, and psychologists about their knowledge of AAI. Most participants in these studies believed that although AAI had positive treatment effects, they wanted more information and research (Berget et al., 2013).

Staff job satisfaction was assessed in a dementia unit using an aquarium (Edwards et al., 2014). Patients and staff were exposed to the aquarium, which had been introduced to patients on the dementia unit. Resident behavior improved based on four criteria: uncooperative, irrational, sleep habits, and inappropriate behavior. Staff job satisfaction scores also improved significantly (Edwards et al., 2014).

Wells and Perrine (2001) asked 193 employees from 31 companies that allowed pets in the workplace about the benefits of pets in the workplace versus those who did not bring pets to work or those who did not own pets. Participants who brought pets to work

responded that their pets reduced their levels of stress and had a positive effect on their health. Title I of the ADA protects workers with disabilities in the workplace (Kizziar & Dodds, 2014). The HAB gives employees with disabilities access to work. Companies do not have to allow service animals in the workplace, but they do have to make reasonable accommodations for employees with disabilities (Kizziar & Dodds, 2014). For example, if the presence of service animals can help workers to perform the essential duties of their jobs, then medical documentation from health care providers will allow the workers to have service animals in the workplace.

Some firms that are not relaxing their "no pet" policies are finding themselves in court (Von Bergen & Bressler, 2015). Workers have begun to insist that they be allowed to bring their pets to work with them, and they have petitioned their companies to relax the ban on pets. Companies not complying with requests of employees with disabilities are being charged with discrimination. Employers have seen a sharp increase in the number of employees who use animals for mental, physical, and emotional support (Von Bressler & Bressler, 2015).

R. T. Barker et al. (2012) studied the physiological and perceived stress, perceptions of job satisfaction, organizational affective commitment, and perceived organizational support of employees who brought their dogs to work, employees who did not bring their dogs to work, and employees who did not have pets. Stress declined in workers who brought their dogs to work and increased when their dogs were not present with them in the workplace. Cortisol was the physiological stress measure used in the quantitative study, which was one of the first to investigate the workplace on employees'

stress and job satisfaction, support, and commitment using dogs (R. T. Barker et al., 2012)

Because the presence of pets has been found to be relaxing and more employees want to bring emotional assistance animals to work, Von Bergen and Bressler (2015) offered advice to employers thinking of implementing a workplace animal policy. They suggested that organizations develop formal procedures when requests come in so that pet policies are consistent across workplaces. All companies then could have animals on site, but for now, some companies allow animals, but others do not. Such consistency would help companies to have formal procedures and documentation in place when and if they might need them in court. Companies that do not allow animals in the workplace are being sued by employees (Von Bergen & Bressler, 2015).

Retail Setting, Job Satisfaction, and Job Performance

Retail Setting

Retail businesses face challenges such as competition in the marketplace and smaller profit margins (McLean, 2006). Stores must strategically purchase goods while reducing operating costs and meeting the expectations of shareholders (Tay et al., 2016). Other factors facing retail establishments include high employee turnover, employee theft, and the negative view of retail as a career choice (Donnelly & Etzel, 1977).

Most retail outlets have focused on external factors such as meeting customer satisfaction and loyalty (Tay et al., 2016). Many retail customers have focused on the quality of services received from employees during retail visits (Schneider & Bowen,

1993). In past years, critical internal factors such as employee satisfaction and performance were overlooked (Donnelly & Etzel, 1977).

Many retail positions still involve physical exertion and long hours (Broadbridge, 1999; Rhoads et al., 2002). The work also requires employees to be accurate and efficient in their performance under stressful work conditions (Chung et al., 2012). Workers often must balance the demands of supervisors and customers simultaneously, situations that can lead to lower job satisfaction (Rhoads et al., 2002).

Workers play an important role in the retail landscape (Goyal & Gupta, 2016) because they often are the only individuals interacting directly with customers (Ram et al., 2011). These individuals need good interpersonal and communication skills (Goyal & Gupta, 2016) to provide advice to customers, set up and display merchandise, keep the stores clean and secure, and maintain positive store and self-images. Challenges for human resource departments include attracting the right people who have the right skills, providing training, and paying adequate wages to maintain employee satisfaction (Goyal & Gupta, 2016).

Job Satisfaction

Employees' job satisfaction is important in the retail sector (Goyal & Gupta, 2016). The employees deliver services that might be key to competitive advantage in the retail sector. An organizational climate that is a service environment can result in employees' attitudes that are of higher value that may result in more robust financial outcomes. Schneider et al. (1992) concluded that employees were more likely to provide excellent customer service when the organizations expected and rewarded this behavior.

Heskett et al. (1997, 2003) found that satisfied retail service employees delighted customers and that the customers were loyal and made repeat purchases in return.

Heaton et al. (2008) emphasized employee satisfaction as instrumental to the success of retail businesses. They suggested that retail locations implement internal marketing strategies with their employees. El Samen and Alshurideh (2012) discussed referring to employees as internal customers who deserve marketing plans as much as external customers do to satisfy their needs. Heaton et al. added that marketing plans may facilitate the development of employees with positive job satisfaction. Maximizing retail employees' job satisfaction and commitment can help to achieve a competitive business advantage (Leonard & Murphy, 2013).

Other researchers have discussed the importance of job satisfaction in all workplace settings. Job satisfaction affects life satisfaction, and vice versa, according to Judge and Watanabe (1994). Judge and Church (2000) stated that job satisfaction has been the most studied topic in industrial and organizational psychology. Some researchers (e.g., Staw et al., 1986) have studied the job satisfaction of individual workers, whereas others (e.g., Judge & Klinger, 2008) have studied satisfaction in terms of its impact on absenteeism or employee turnover rates.

Locke (1976) commented that the most important aspects of job satisfaction are creative work, good relationships, good pay, and job security. R. V. Davis (1992) remarked that workers who can use their talents in the workplace are the most satisfied employees. Sousa-Poza (2000) added that job satisfaction comprises internal and external factors. Internal factors include worker tasks, professional development, and

achievement. External factors include working conditions, wages, and relationships with family and friends. Job dissatisfaction may affect workers' mental health (Faragher et al., 2005) and lead to anxiety and depression. J. Field (2008) added that poor compensation and unsatisfactory working conditions also may result in workers' dissatisfaction. Lack of job security and promotion completed J. Field's list of reasons for job dissatisfaction.

Job Performance

Salespeople play an important role in the success of retail businesses (Dubinsky & Hartley, 1986). Dubinsky and Hartley (1986) noted that even though researchers have considered job performance in various workplace settings such as hospitals and factories, they have ignored the job performance of retail workers. The researchers identified job performance of retail store employees as an important concern to managers in terms of the impact on companies' viability and profit.

Yurchisin and Park (2010) self-evaluated job performance and employee retention in 317 retail settings. They found that the workers who had positive job performances also felt satisfied in their jobs. Yurchisin and Park concluded that workers who were performing better were less likely than workers who were performing poorly to leave their jobs.

Other researchers have discussed the importance of job performance in all workplace settings**.** Arvey and Murphy (1998) defined job performance as individual performance on a variety of tasks that can be measured. Sonnentag and Frese (2002) added the term "dynamic" to the definition because worker performance is fluid (Carlos & Rodrigues, 2016). Sonnentag and Frese noted that performance comprises behaviors

and outcomes, meaning that workers are always learning and that this learning can change job performance outcomes. Viswesvaran (2001) added that job performance is a behavioral concept that can be evaluated.

Summary and Transition

Chapter 2 presented a review of literature relevant to venues where HAIs have occurred. The reviewed studies highlighted the positive effects of HAIs in various capacities. Many of the researchers mentioned in the chapter asserted that HAIs are beneficial in many venues and that more empirical research is needed in venues such as nursing homes, therapy settings, and so on. Lasa et al. (2011), in their review of research on HAIs, noted that most studies had small sample sizes, selection bias, and poor generalizability. They also concluded that more empirical research is needed.

The review identified the gap in the literature on HAIs and the workplace. The current study investigated HAIs in three retail workplace environments: One had no HAIs (none), one had occasional HAIs because of its pet-friendly policies (occasional), and one had persistent HAIs (constant). The focus of the study was to determine the effects of these environments on job performance and job satisfaction as well as the relationship between them.

Chapter 3 provides details about the research methods and design of this quantitative study. Also included in the chapter are explanations of the recruitment of the participants, data collection, and data analysis. The three RQs and hypotheses are addressed. Also discussed are the reliability and validity of study instruments, ethical procedures that were followed, and threats to validity.

Chapter 4 presents demographic data about the sample, descriptive statistics, and some correlations of interest. It then covers the tests of assumption for the statistic used and the results for the three RQs and associated hypotheses. Chapter 5 provides an interpretation of study findings. Study limitations, recommendations for future research, implications for social change, and a conclusion are included in this final chapter.

Chapter 3: Research Method

A quantitative study was conducted to measure the effect of HAIs on the job performance and satisfaction of employees in the retail environment. HAIs have been used in various venues and have been shown to increase well-being by lowering blood pressure and reducing anxiety (Boyd, 2016). Some researchers (e.g., Dieterich, 2005) have called for more empirical research to determine whether these positive results of HAIs are repeatable. Other researchers (e.g., Zilcha-Mano et al., 2011) have called for more studies on the impact of HAIs, particularly in the workplace. Consequently, the study explored the effect of HAIs on retail workers' job satisfaction and job performance.

Chapter 3 covers the research design and rationale to address the RQs and hypotheses. Participants were selected from three retail environments: "none," a retail store that did not have HAIs; "occasional," one that supported occasional HAIs because of its pet-friendly policies; and "constant," one that supported persistent HAIs because of its product line. A sample of convenience was obtained from all three retail environments. Two validated survey instruments, the DJSS and the JPM, were used to collect the data to measure and compare the job satisfaction and job performance of workers in the three retail settings. Threats to validity and the ethical procedures also are explained in the chapter.

Research Questions and Hypotheses

RQ1: How does the relationship between employee job satisfaction and job performance differ in retail environments with varied levels of HAIs?

H_{01}: The relationship between employee job satisfaction, as measured by the DJSS, and job performance, as measured by the JPM, in retail environments with varied levels of HAIs (none, occasional, and constant) does not differ.

H_{a1}: The relationship between employee job satisfaction, as measured by the DJSS, and job performance, as measured by the JPM, in retail environments with varied levels of HAIs (none, occasional, and constant) differs.

RQ2: How does the level of HAIs at work influence the job satisfaction of employees in a retail environment?

H_{02}: The level of HAIs at work (none, occasional, and constant) does not influence the job satisfaction of employees, as measured by the DJSS, in a retail environment.

H_{a2}: The level of HAIs at work (none, occasional, and constant) influences the job satisfaction of employees, as measured by the DJSS, in a retail environment.

RQ3: How does the level of HAIs at work influence the job performance of employees in a retail environment?

H_{03}: The level of HAIs at work (none, occasional, and constant) does not influence the job performance of employees, as measured by the JPM, in a retail environment.

H_{a3}: The level of HAIs at work (none, occasional, and constant) influences the job performance of employees, as measured by the JPM, in a retail environment**.**

Research Design and Rationale

This quantitative study followed a quasi-experimental design. As mentioned earlier, two validated survey instruments, the DJSS and the JPM, were used to collect data to measure and compare the job satisfaction and job performance, respectively, of retail workers with three levels of HAIs at work (none, occasional, and constant). Questions from the DJSS and the JPM, along with a demographics survey, were loaded into SurveyMonkey. The demographics survey asked for specific details: retail worker age, gender, level in retail organization, months of retail employment at that location, full- or part-time work status, and the retail setting level of HAIs (see Appendix A).

Composite data from the DJSS and JPM were transferred to an Excel spreadsheet. These data were then entered into SPSS for analysis. RQ1 was addressed using a one-way ANOVA test to determine if two or more groups were significantly different from each other. Post hoc Tukey HSD tests were run to make pairwise comparisons. RQ2 was addressed by using a one-way ANOVA test to determine if two or more groups were different from each other. Post hoc Tukey HSD tests were run to make pairwise comparisons. It is appropriate to use pairwise comparisons when sample sizes are unequal or confidence intervals are needed, but it also is suitable even with equal sample sizes without confidence intervals.

RQ3 was addressed using a one-way MANOVA test to determine the relationship between employee job satisfaction (DJSS) and job performance (JPM) with different levels of HAIs. Composite data from the DJSS and JPM were transferred to an Excel spreadsheet. These data were then entered into SPSS for analysis.

MANOVA, the method recommended when there are multiple DVs, was used to analyze the survey data (Bray & Maxwell, 1982). This test is useful and has advantages over an ANOVA when the IV is manipulated. First, by measuring different DVs, the most important factor might be discovered. Second, if only ANOVA testing is conducted independently, more Type 1 errors might occur. In addition, MANOVA can identify differences not uncovered by ANOVA tests, such as if a there is significant difference on a variable in three participant groups (Finch & French, 2013; Hair et al., 2010; Tabachnick & Fidell, 2007). The current study employed a one-way MANOVA. Given that the three subsamples of retail workers were approximately the same size, the Box's M test was appropriate to test the null hypotheses to determine whether the covariant matrices were equal (A. Field, 2009).

Methodology

Population

The participants were employees (i.e., managers, floor personnel, and other staff) who were working at one of three retail store settings at the time of the study: One setting had a policy of no animals permitted (none), one had a pet-friendly policy allowing animals occasionally (occasional), and one allowed animals on site because of its retail product line (constant). In the no-animal retail setting, employees' duties included customer service, basic selling, front-end operations, and merchandising. In the occasional animal retail setting, employees' duties were essentially the same as those at the no-animal store, with the exception of acknowledging the presence of customers' pets and some related interactions. In the constant animal retail setting, employees' duties

were essentially the same as those at the occasional animal store, but they also depended on assignment, such as bird, fish, reptile, amphibian, feline, and/or canine feeding, cleanup, and so on, as well as interacting with retail animals and customers' pets.

Sampling and Recruitment

A sample should satisfy three basic criteria (Ferber, 1977): (a) The sample should be able to address the RQs, (b) the sample size should be adequate, and (c) the participants should be representative of the target population. A sample of convenience comprising workers from three retail environments with different policies regarding the presence of animals (i.e., none, occasional, and constant) was obtained. A convenience sample facilitates the testing or exploration of certain hypotheses or different views of the phenomenon under investigation, usually at low cost (Ferber, 1977).

To ensure direct retail participant information, two direct sampling data measures were used. First, retailers were approached to obtain permission to conduct this study in their stores. As with any research project, the participants and sites under investigation needed ample information to determine if participating in the study was worthwhile (Nosek et al., 2002). Retail decision makers were given an information letter that included the researcher's professional and academic credentials and explained the objectives of the study as well as the risks and benefits of participation. The consent form that interested individuals had to sign to join the study was included. Decision makers were given information about the survey used to collect the data and the plan to address confidentiality concerns. They also were assured that participation in the study was voluntary and that all participants had the right to withdraw from the study at any time

and with no negative repercussions. The researcher's personal contact information was available to the decision makers and the participants. Most of the participants completed the survey that was available on SurveyMonkey's website.

The corporate level of each retailer gave permission for the researcher to approach potential participants. Retail groups were contacted so that potential participants with retail affiliations would have a chance to respond. Participants were recruited using an alternative convenience sample of retail workers from LinkedIn and Facebook. The Internet had access advantages for hard-to-reach or difficult-to-find participants (Nosek et al., 2002). LinkedIn was used to recruit participants by using the same materials and protocols mentioned earlier: an information letter with the researcher's professional and academic credentials, objectives of the study, risks and benefits of participation, consent form, and the researcher's personal contact information.

Walden University provides a participant pool for student researchers. The study was posted by Walden University's IRB on the university's website. The participant pool was used to solicit retail participants who were attending Walden University at the time of the study. The participants who answered the surveys were given class credit.

When it was determined that a specific targeted retail site, namely, one with animals being present constantly was not represented adequately, a second data collection technique was used. This process started with retail decision makers' approval. The retail decision makers were provided with information about the study, including researcher's credentials, Walden University's contact information, and consent form. With retail decision makers' approval, consenting participants received the same information. Some

consenting participants used the SurveyMonkey website on mobile devices or computers; others used the paper survey form provided by the researcher. A small stipend (i.e., $5.00 retail gift card) was given to participants who completed the surveys on site.

Appropriate sample size calculations are important to ensure the appropriateness of the research design (Charan & Biswas, 2013). Failure to use adequate samples can result in Type I errors and rejection of the null hypotheses (D'Amico et al., 2001). The exploratory nature of this study required the use of a sample of convenience comprising workers from three retail work settings with different levels of HAIs: none, occasional, and constant. A power analysis using G*power was conducted to determine the number of participants needed for the study. G*power suggested that 153 participants would be the total number of participants required, 51 per group (0.95). A goal of 180 participants, approximately 60 from each retail setting, was set to allow for attrition, outliers, and those who did not complete the survey correctly.

Instrumentation and Construct Operationalization

Retail workers' job satisfaction was measured using questions from Loi et al.'s (2009) DJSS (see Appendix B). The developers of the instruments did not require permission to use them (see Appendix C). The participants in Loi et al.'s study to assess job satisfaction were 231 full-time employees working in Hong Kong. Data were collected over 25 working days (Loi et al., 2009). The DJSS contains three items that allow the respondents to self-report job satisfaction. The items are ranked on a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*).

1. At present, I am satisfied with my job.

2. Right now, I like my job.
3. At this moment, I like working here.

Regarding DJSS validity and reliability, the scale had been developed to measure daily job satisfaction (Loi et al., 2009). The DJSS is a scale of the Michigan Organizational Assessment Questionnaire Job Satisfaction Subscale (MOAQ-JSS; Bowling & Hammond, 2008). Bowling and Hammond (2008) conducted a meta-analysis of the MOAQ-JSS and found it to be a valid and reliable measure of job satisfaction. The sample-weighted internal consistency reliability was .84 ($k = 79$, $N = 30{,}623$). The mean sample-weighted test-retest reliability was .50 ($k = 4$, $N = 746$). Loi et al. (2009) conducted reliability data on the DJSS to estimate daily job satisfaction and found the reliability alpha = .96.

Scoring the DJSS included collecting answers to the three questions about each of the three retail settings and then aggregating them. A total of 133 participants from the three retail environments answered the DJSS questions. The composite scores were then used to run the one-way ANOVA statistical analysis and post hoc tests.

The participating retail workers' job performance was measured using survey questions from Onwezen et al.'s (2014) JPM (see Appendix B). The developers of the instruments gave permission to use them (see Appendix C). The JPM contains nine items that allow the respondents to self-report job performance. The items are ranked on a 5-point Likert scale ranging from 1 (*totally not applicable*) to 5 (*totally applicable*).

1. Today, I achieved the objectives of my job.
2. Today, I have met my criteria for job performance.

3. Today, I demonstrated expertise in all job-related tasks.
4. Today, I fulfilled all the requirements of my job.
5. Today, I could manage more responsibility than typically assigned to me.
6. Today, I appeared to be suitable for a higher-level role.
7. Today, I was competent in all areas of the job and handled tasks with proficiency.
8. Today, I performed well in the overall job by carrying out tasks as expected.
9. Today, I planned and organized to achieve objectives of the job and meet deadlines.

Regarding validity and reliability, the JPM was developed from the task-based Job Performance Scale (Goodman & Svyantek, 1999). The purpose of the JPM is to assess job performance. Reliability conducted on the JPM yielded a Cronbach's coefficient alpha from the baseline instrument of .82 (Onwezen et al., 2014) Coefficients collected on Day 1 yielded .85, Day 2 yielded .90, and Day 3 yielded .88, respectively. This instrument was surveyed on nonprofit workers in The Netherlands (Onwezen et al., 2014). Participants also were asked to complete a demographic survey on age, gender, educational level, time with the company, level in the retail organization, and full- or part-time employment status.

Scoring the JPM required collecting answers to the nine questions about the three retail settings. A total of 133 participants answered the nine JPM questions across the three retail environments. The composite scores were then used to run one-way ANOVA and post hoc tests.

Data Collection

Data were collected after receiving approval from Walden University's IRB (IRB approval #02-15-19-0231453) to conduct the study. This process took 6 months and followed a protocol that included informing the potential participants about the purpose and significance of the study. All information about the data collection process was shared honestly and openly with the participants. No deception or manipulation happened in any interactions with the participants throughout the study.

Individuals who agreed to join the study received the surveys via SurveyMonkey. Personal contact information (i.e., name, address, telephone number, and e-mail address) was obtained from each participant. SurveyMonkey is a free online service that allows users to conduct and monitor surveys directly on the Internet. Researchers from the field of psychology and individuals involved in the business sector use Internet surveys to collect their data (Roztocki, 2001). Web-based surveys help to reduce costs and human error (Cobanoglu et al., 2001).

The SurveyMonkey website was monitored to respond to any questions or issues that the participants might have had about the surveys. Their responses to the survey items were kept anonymous to ensure that the participants provided honest and thorough responses. Participants were notified that any information that they shared in completing the surveys would remain confidential and that their identities would remain anonymous. Participants were encouraged to complete the surveys in a timely manner.

Participants also were recruited using Walden University's participant pool. Participants were contacted through Walden University classrooms to participate in the

study for class credit. This site was monitored by the researcher for data collection and participants' questions. Very few responses came through this Walden University site.

A second data collection technique was used when numbers of targeted retail participants with animal presence were insufficient and did not meet study design requirements. First, targeted retail decision makers were given study information, researcher credentials and contact information, and Walden University contact information. When retail decision makers approved of direct worker contact, retail participants were given study information, researcher credentials and contact information, and Walden University contact information. Consenting participants either completed the surveys on the SurveyMonkey site or filled out paper surveys with the researcher. A stipend of a $5.00 gift card was given to participants who completed the paper surveys. Participants were assured of information confidentiality. Following completion of the study, the participants were able to access the results.

Data Analysis Plan

Studies require careful data collection and interpretation of the analyzed data (Ong & Putch, 2017). Two validated survey instruments, the DJSS and the JPM, were used to collect data to measure and compare the job satisfaction and job performance, respectively, of retail employees with three levels of HAIs at work (none, occasional, and constant). Data were collected by SurveyMonkey using three questions from the DJSS and nine questions from the JPM. The demographic survey asked for information about age, gender, level in retail organization, months of retail employment at that location, full- or part-time work status, and level of HAIs in each retail setting.

Composite data from the DJSS and JPM were transferred to an Excel spreadsheet to support data reduction and organization for analysis. Each participant and each survey item received a discrete numeric identifier. Each variable was represented, and any omissions were detected. Other participation details, such as age, gender, race, job title, time/position with retail company, retail employment status, and highest level of education also were captured. DJSS and JPM scores were calculated in Excel, then the data were entered into SPSS using the same discrete numeric identifiers. SPSS allows adjustments for unequal sample sizes because of the withdrawal of some participants from the study or other reasons.

RQ1 was addressed using a one-way ANOVA test to determine if two or more groups different from each other significantly answering the DJSS survey questions. A one-way ANOVA test was performed. Potential familywise error was addressed using a Tukey correction, given that multiple statistical tests would be run on the single data set. It is the best option for all-possible pairwise comparisons when sample sizes are unequal, confidence intervals are needed, or with equal samples sizes without confidence intervals. Composite data from the three DJSS questions were used. Post hoc Tukey HSD tests were run in SPSS to make pairwise comparisons.

RQ2 was addressed by using a one-way ANOVA test to determine if two or more groups were different from each other, significantly answering the JPM survey questions. Composite data from the JPM survey were used. Post hoc Tukey HSD tests were run in SPSS to make pairwise comparisons. RQ3 was addressed using a one-way MANOVA test to determine the relationship between employee job satisfaction (DJSS) and job

performance (JPM) with different levels of HAIs. Composite data from the DJSS and JPM were used.

Threats to Validity

One potential threat to validity is method bias (Cobanoglu & Cobanoglu, 2003). This method bias included using two forms of surveys to collect data. Most participants used Web-based surveys, and the responses were captured on SurveyMonkey. When targeted retail participants were underrepresented online, SurveyMonkey and paper-based surveys were used. The paper-based surveys were the same as the web-based survey. Most participants did not receive a stipend for survey completion, but those who answered in person did receive a stipend of a $5 gift card. Another threat to validity involved trying to generalize the results of the data obtained from the sample to all retail populations (Nosek et al., 2002).

Ethical Procedures

More researchers are using the internet as their data collection medium (Cobanoglu & Cobanoglu, 2003). This use of technology has presented challenges to researchers. One issue, for example, involves ensuring protection of the participants' confidential information during data transmission (Nosek et al., 2002). This problem can occur if and when study participants use any computers, especially computers in the workplace. Unprotected data can be intercepted by third parties. When collecting their data, researchers can resolve confidentiality issues by using questionnaires with numeric identifiers known only to them (Nosek et al., 2002).

Summary and Transition

Chapter 3 provided an explanation of the design of this study of the effects of different levels of HAIs (i.e., none, occasional, and constant) on job satisfaction and job performance in three retail environments. The IV was level of HAIs. The DVs were job satisfaction and job performance of the retail workers.

Chapter 3 reiterates the three RQs and associated hypotheses and presents details about the statistical tests used to analyze the data. The participants were asked to complete two surveys, the DJSS and the JPM, to measure job satisfaction and job performance. These instruments were reviewed for their respective reliability and validity information. Chapter 3 closes with explanations of the threats to validity and ethical procedures.

Chapter 4 presents the sample demographic data, descriptive statistics, and some correlations of interest. It then covers the tests of assumption for the statistics used and the results for the three RQs and hypotheses. Included in Chapter 5 are the interpretation of the findings, a discussion of the limitations, recommendations for future research, implications for social change, and a conclusion.

Chapter 4: Results

The study investigated the effect of three different levels of HAIs (i.e., none, occasional, and constant) on the job performance and job satisfaction of employees in three retail environments. Based on the current literature on HAIs on retail employees' job satisfaction and performance, the following RQs and associated hypotheses were raised:

RQ1: How does the relationship between employee job satisfaction and job performance differ in retail environments with varied levels of HAIs?

H_{01}: The relationship between employee job satisfaction, as measured by the DJSS, and job performance, as measured by the JPM, in retail environments with varied levels of HAIs (none, occasional, and constant) does not differ.

H_{a1}: The relationship between employee job satisfaction, as measured by the DJSS, and job performance, as measured by the JPM, in retail environments with varied levels of HAIs (none, occasional, and constant) differs.

RQ2: How does the level of HAIs at work influence the job satisfaction of employees in a retail environment?

H_{02}: The level of HAIs at work (none, occasional, and constant) does not influence the job satisfaction of employees, as measured by the DJSS, in a retail environment.

H_{a2}: The level of HAIs at work (none, occasional, and constant) influences the job satisfaction of employees, as measured by the DJSS, in a retail environment.

RQ3: How does the level of HAIs at work influence the job performance of employees in a retail environment?

H_{03}: The level of HAIs at work (none, occasional, and constant) does not influence the job performance of employees, as measured by the JPM, in a retail environment.

H_{a3}: The level of HAIs at work (none, occasional, and constant) influences the job performance of employees, as measured by the JPM, in a retail environment.

Chapter 4 presents demographic data about the participants, descriptive statistics, and some correlations of interest. A one-way MANOVA was used for RQ1, and step-down one-way ANOVAs were used for RQ2 and RQ3. The tests of assumption for the statistics used and the results for the MANOVA and the associated hypotheses also are included in this chapter.

Sample Demographics

Table 1 presents a summary of demographic data on gender, race, age, and education. For gender, female participants comprised the predominant group (n = 108; 72.0%), outnumbering male participants by a ratio of almost 3 to 1 (n = 38; 25.3%). In terms of race/ethnicity, the largest group of participants self-identified as White (n = 126; 84%), with the rest of the sample comprising African American (n = 8; 5.3%), Hispanic or Latinx (n = 7; 4.7%), and Asian American (n = 2; 1.3%) participants. The largest participant group was 18 to 24 years of age (n = 49; 32.7%), followed by participants ages 25 to 34 years (n = 32; 21.3%), 35 to 44 years (n = 23; 15.3%), 45 to 54 years (n = 20; 13.3%); 55 to 64 years (n = 13; 8.7%), and 65+ years (n = 9; 6.0%). Most

participants had achieved a college degree or higher (*n* = 6 8; 45.3%), followed by those who had some college education (*n* = 55; 36.7%) and then individuals who had attended or graduated from high school (*n* = 23; 15.3%).

Table 1

Participant Demographics (Gender, Race/Ethnicity, Age, Education)

Demographic	Frequency	%
Gender		
Male	38	25.3
Female	108	72.0
Other	1	.7
Missing	3	2.0
Race/Ethnicity		
White	126	84.0
African American	8	5.3
Hispanic or Latino	7	4.7
Asian American	2	1.3
Another race	4	2.7
Missing	3	2.0
Age		
Under 18	1	.7
18-24	49	32.7
25-34	32	21.3
35-44	23	15.3
45-54	20	13.3
55-64	13	8.7
65+	9	6.0
Missing	3	2.0
Highest level of education		
High school	23	15.3
Some college	55	36.7
College degree or greater	68	45.3
Missing	4	2.7

Note: N = 150

Table 2 presents the participants' employment information. Most participants had full-time jobs (*n* = 96; 64.0%), but a significant number of them had part-time jobs (*n* = 51; 34.0%). Most participants had worked for their respective retail companies for a year or longer (*n* = 108; 72%), whereas a significant number had been with their companies for a year or less (*n* = 39; 26%).

Table 2

Employment Status of Participants

Employment status	Frequency	%
Retail employment status		
Part time	51	34.0
Full time	96	64.0
Total	147	98.0
Missing	3	2.0
Time with retail company		
< 1 yr	39	26.0
1 yr or longer	108	72.0
Missing	3	2.0

Participant positions in the retail companies were diverse: cashiers (*n* = 21; 14%), stockpersons (*n* = 8; 5.3%), first-line supervisors (*n* = 20; 13.3%), floor associates (*n* = 29; 19.3%), assistant store managers (*n* = 7; 4.7%). and store managers (*n* = 15; 10%). The Other category comprised the largest group (*n* = 46; 30.7%; see Table 3).

Table 3

Positions in Companies

Position	Frequency	%
Cashier	21	14.0
Stockperson	8	5.3
First-line supervisor	20	13.3
Floor associate	29	19.3
Assistant store manager	7	4.7
Store manager	15	10.0
Other	46	30.7

Descriptive Statistics

Descriptive statistics were run on the three HAI retail settings: none, occasional and constant. Three items from the DJSS assessing job satisfaction and nine items from the JPM assessing job performance were asked of all participants. Information about the validity and reliability of these two instruments is revisited.

Job Satisfaction

Regarding DJSS validity and reliability, the scale had been developed to measure daily job satisfaction (Loi et al., 2009). The DJSS is a scale of the Michigan Organizational Assessment Questionnaire Job Satisfaction Subscale (MOAQ-JSS; Bowling & Hammond, 2008). Bowling and Hammond (2008) conducted a meta-analysis of the MOAQ-JSS and found it to be a valid and reliable measure of job satisfaction. The sample-weighted internal consistency reliability was .84 ($k = 79$, $N = 30{,}623$). The mean sample-weighted test-retest reliability was .50 ($k = 4$, $N = 746$). Loi et al. (2009) conducted reliability data on the DJSS to estimate daily job satisfaction and found the reliability alpha = .96.

Regarding DJSS reliability with this study, questionnaire data from the DJSS were run through SPSS. Cronbach's alpha measures the internal consistency or reliability of an instrument. It is commonly used with a Likert scale to determine scale reliability or consistency. Cronbach's alpha for the three items was 0.936, indicating a high level of internal consistency on this scale with this sample. Table 4 presents the value that Cronbach's alpha would have been if that particular question had been omitted. Corrected item totals for each of the three questions were 0.804, 0.896, and 0.903, respectively. Corrected item-total correlations were high, so removal of any questions would have resulted in a lower Cronbach's alpha, which was not desirable.

Table 4

Item-Total Statistics for DJSS

	Item-total statistics				
	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Squared multiple correlation	Cronbach's alpha if item deleted
At present, I am satisfied with my job.	9.51	7.623	.804	.646	.955
Right now, I like my job.	9.54	7.079	.896	.846	.883
At this moment, I like working here.	9.45	7.263	.903	.851	.878

The three items from the DJSS allowed the respondents to self-report their job satisfaction, all of whom worked in one of three retail settings: none, occasional, and constant. The items were ranked on a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). The DJSS item mean and standard deviation results are presented in Table 5. The means for retail establishments with occasional ($M = 4.71$, $SD = 1.357$) or constant ($M = 5.53$, $SD = .943$) presence of animals were higher than those for retail establishments with none ($M = 3.90$, $SD = 1.524$) for all DJSS items. The means for retail establishments with constant animal presence were higher than those of retail establishments with occasional animal presence for all DJSS items. The means for retail establishments with no animal presence were lower than those with higher and occasional animal presence for all DJSS items.

Table 5

DJSS Item Descriptive Statistics for Workers in the Three Retail Settings

DJSS item	Animals present	*N*	*M*	*SD*
At present, I am satisfied with my job.				
	None	45	3.89	1.655
	Occasional	42	4.76	1.226
	Constant	46	5.54	.862
	Overall	133	4.74	1.451
Right now, I like my job.				
	None	45	3.96	1.476
	Occasional	42	4.62	1.431
	Constant	46	5.50	.983
	Overall	133	4.70	1.451
At this moment, I like working here .				
	None	45	4.13	1.440
	Occasional	42	4.74	1.415
	Constant	46	5.54	.983
	Overall	133	4.81	1.410
DJSS overall item averages				
	None	45	3.90	1.524
	Occasional	42	4.71	1.357
	Constant	46	5.53	.943
	Overall	133	4.75	1.467

Job Performance

Regarding JPM reliability with this study, data obtained from the JPM were run through SPSS. Cronbach's alpha measures the internal consistency or reliability of an instrument. It is commonly used with a Likert scale to determine scale reliability or consistency. Cronbach's alpha was 0.927, indicating a high level of internal consistency on this scale with this sample (see Table 6).

Table 7 presents the value that Cronbach's alpha would have been if that particular question had been omitted. Several questions had a lower Cronbach's alpha on this questionnaire for these data, as presented in the corrected item-total correlation. Lower corrected item-total correlation numbers were 0.671, 0.633, 0.591, and 0.692, respectively. Deleting these questions might have led to a smaller improvement in the

Cronbach's alpha for this instrument and might have provided more reliability or consistency. The Cronbach's alpha of the Item Deleted column still showed higher data values, so questions did not need to be deleted to reflect a higher score.

Table 6

Reliability Statistics

Cronbach's alpha	Cronbach's alpha based on standardized items	No. of items
.927	.933	9

Table 7

Item-Total Statistics for JPM

Item-total statistics					
	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Squared multiple correlation	Cronbach's alpha if item deleted
Today, I achieved the objectives of my job.	34.37	44.886	.671	.646	.924
Today, I have met my criteria for job performance	34.17	44.932	.832	.814	.914
Today, I demonstrated expertise in all job-related tasks.	34.33	44.829	.805	.725	.915
Today, I could manage more responsibility than typically assigned to me.	34.53	45.084	.633	.467	.926
Today, I fulfilled the requirements of my job.	34.17	44.806	.843	.764	.913
Today, I appeared to be suitable for a higher level role.	34.46	45.568	.591	.466	.930
Today, I was competent in all areas of the job and handled tasks with proficiency.	34.18	45.316	.832	.763	.914
Today, I performed well in the overall job by carrying out tasks with proficiency.	34.16	45.301	.832	.783	.914
Today, I planned and organized to achieve objectives of the job and meet deadlines.	34.38	44.708	.692	.525	.922

The nine-item JPM allowed the respondents to self-report their job performance, all of whom worked in one of three retail settings: none, occasional, and constant. The items were ranked on a 5-point Likert scale ranging from 1 (*totally not applicable*) to 5 (*totally applicable*). The JPM mean and standard deviation results for the participants are shown in Table 8. The means for retail establishments with occasional (M = 4.43, SD = .938) or constant (M = 4.58, SD = .785) animal presence were higher than those of retail establishments with none (M = 3.86, SD = 1.211) for all JPM items.

Table 8

JPM Item Descriptive Statistics for Workers in the Three Retail Settings

JPM item	Animals present	*n*	*M*	*SD*
Today, I achieved the objectives of my job.				
	None	45	3.76	1.282
	Occasional	42	4.48	.943
	Constant	46	4.46	1.048
	Overall	133	4.23	1.146
Today, I met my criteria for job performance.				
	None	45	3.96	1.186
	Occasional	42	4.60	.826
	Constant	46	4.72	.584
	Overall	133	4.42	.955
Today, I demonstrated expertise in all job-related tasks.				
	None	45	3.76	1.190
	Occasional	42	4.40	.912
	Constant	46	4.63	.572
	Overall	133	4.42	.955
Today, I could manage more responsibility than typically assigned to me.				
	None	45	3.53	1.254
	Occasional	42	4.29	.995
	Constant	46	4.37	1.103
	Overall	133	4.06	1.179
Today, I fulfilled the requirements of my job.				
	None	45	4.04	1.147
	Occasional	42	4.64	.791
	Constant	46	4.61	.774
	Overall	133	4.43	.956
Today, I appeared to be suitable for a higher level role.				
	None	45	3.64	1.317
	Occasional	42	4.31	1.047
	Constant	46	4.46	1.048

JPM item	Animals present	*n*	*M*	*SD*
	Overall	133	4.14	1.192
Today, I was competent in all areas of the job and handled tasks with proficiency				
	None	45	4.11	1.112
	Occasional	42	4.48	.917
	Constant	46	4.65	.604
	Overall	133	4.41	.922
Today, I performed well in the overall job by carrying out tasks with proficiency.				
	None	45	4.11	1.071
	Occasional	42	4.43	.911
	Constant	46	4.76	.524
	Overall	133	4.44	.924
Today, I planned and organized to achieve objectives of the job and meet deadlines				
	None	45	3.82	1.336
	Occasional	42	4.24	1.100
	Constant	46	4.57	.807
	Overall	133	4.21	1.135
JPM overall item averages				
	None	45	3.86	1.211
	Occasional	42	4.43	.938
	Constant	46	4.58	.785
	Overall	133	4.30	1.040

Correlational Analysis

Data from the responses to the three DJSS items yielded a composite average for participants ($N = 133$). The mean score was 4.74; standard deviation was 1.437. Data from the responses to the nine JPM items yielded a composite average for participants ($N = 133$). The mean score was 4.30; standard deviation was 1.040.

The potential relationships among the three DJSS and nine JPM items were examined using a Pearson product moment correlation (see Table 9). The DJSS and JPM showed several trends. These items were measuring the participants' job satisfaction and performance on a particular day of retail work. There was a positive correlation between the responses "I am satisfied with my job" and "demonstrating job expertise," $r = .422$, $p \leq .001$. There was a positive correlation between the responses "I like working here"

and "planned to achieve job objectives/deadlines," $r = .466$, $p \leq .001$. There was a positive correlation between the responses "I like my job" and "performed job well with proficiency," $r = .790$, $p \leq .001$.

All responses showed a positive correlation. One of the lowest correlations between responses was "liked my job" and "appeared suitable for a higher role," $r = .316$, $p \leq .001$. There also were low correlations between the responses "I like working here" and "appeared suitable for a higher role," $r = .344$, $p \leq .001$.

Table 9

Pearson Correlational Matrix for DJSS and JPM Items

	DJSS items		
JPM items	Satisfied with job	Like job	Like working here
Achieved job objectives	.366**	.424**	.451**
Met job performance criteria	.415**	.384**	.415**
Demonstrated job expertise	.442**	.444**	.431**
Could manage more responsibility	.495**	.373**	.394**
Fulfilled job requirements	.380**	.349**	.401**
Appeared suitable for higher role	.358**	.316**	.344**
Competent & proficient in job	.437**	.410**	.437**
Performed job well with proficiency	.429**	.450**	.444**
Planned to achieve job objectives/deadlines	.410**	.414**	.466**

A Pearson correlation was run between the composite DJSS score and the composite JPM score for the 133 participants, $r = .405$, $p < .01$. Separate Pearson correlations were run between the DJSS and JPM scores for the three retail environments: none, occasional, and constant animal presence (see Table 10). The level of animal presence was then rated correspondingly as 0, 1, and 2. A Pearson correlation was run between the rated level of animal presence and the composite DJSS and JPM scores. The correlation between the retail environment level "none" and the composite DJSS and JPM score was $r = .484$, $p < .01$. The correlation between retail environment level

"occasional" and the composite DJSS and JPM score was $r = .035$, $p < .01$. The correlation between retail environment level "constant" and the composite DJSS and JPM score was $r = .078$, $p < .01$.

Table 10

Composite DJSS and JPM Score Pearson Correlations

	r	*p* value
None	.484	<.01
Occasional	.035	< .01
Constant	.078	< .01
Overall	.405	< .01

The level of animal presence (none, occasional, and constant) was then rated correspondingly as 0, 1, and 2. A Pearson correlation was run between the rated level of animal presence and the composite DJSS and JPM scores (see Table 11). The correlation between retail environment level of animal presence and composite DJSS score was $r = .510$, $p < .01$. The correlation between retail environment level of animal presence and composite JPM score was $r = .345$, $p < .01$.

Table 11

Pearson Correlations Between Rated Level of Animal Presence and Composite DJSS and JPM Scores

Correlations	DJSS	JPM	Setting
DJSS	1	.405**	.510**
JPM	.405**	1	.345**
Setting	.510**	.345**	1

**Correlation was significant at the .01 level (2-tailed).
N = 133

The level of animal presence (none, occasional, and constant) was then rated correspondingly as 0, 1, and 2. A Spearman correlation was run between the rated level of animal presence and the composite DJSS and JPM scores (See Table 12). The

correlation between retail environment level of animal presence and composite DJSS score was $r = .533$, $p < .01$. The correlation between retail environment level of animal presence and composite JPM score was $r = .352$, $p < .01$.

Table 12

Spearmon's Correlation Between Rated Level of Animal Presence and Composite DJSS and JPM Scores

Correlations	DJSS	JPM	Setting
DJSS	1.000	.360**	.533**
JPM	.360**	1.000	.352**
Setting	.533**	.352**	1.000

**Correlation was significant at the .01 level (2-tailed).

Prescreening the Data

The data were prescreened before the statistical analysis was completed. Mertler and Vanatta (2005) suggested prescreening the data before statistical analysis to facilitate interpretation. Data were entered into an Excel spreadsheet to uncover missing data from the original 150 participants. Missing data were handled in two ways in this study. Hertel (1976) argued that if any participants fail to answer 15% or more of the survey questions, their data should be excluded from the analysis. In support of this argument, data from six participants in the current study were removed from the analysis because they held incomplete information. A frequency count also was conducted before completing the statistical analysis. Results indicated that 15 survey entries of the 1,800 possible (i.e., 150 participants x 12 survey answers) were not answered. This was less than 1.00% of possible survey answers.

Tests of Statistical Assumption

Multivariate Outliers

The absence of multivariate outliers is checked by assessing Mahalanobis Distances among retail participants. Composite scores from the DJSS and JPM were run using multiple linear regression in SPSS. This analysis revealed no outliers.

Absence of Multicollinearity

Absence of multicollinearity is checked by conducting correlations on the DVs. The composite scores for DJSS and JPM were run through SPSS. The VIF score should be between 1.00 and 10.00 to show the absence of multicollinearity. Based on VIF scores of 1.00 on both instruments, it was concluded that there was no multicollinearity (see Table 13).

Table 13

Coefficients of DJSS and JPM

Coefficients[a,b]								
		Unstandardized coefficients		Standardized coefficients			Collinearity statistics	
	Model	B	*SE*	Beta	*t*	Sig.	Tolerance	VIF
1	(Constant)	3.885	.160		24.311	.000		
	setting	.845	.123	.516	6.891	.000	1.000	1.000
2	(Constant)	3.910	.111		35.125	.000		
	Setting	.351	.085	.338	4.110	.000	1.000	1.000

[a.] DV: DJSS
[b.] DV: JPM

Sample Size Adequacy

The sample size should satisfy three basic criteria: It should answer the RQs, be adequate, and be representative of the target population (Ferber, 1977). A sample of convenience comprising workers from three HAI retail environments (none, occasional,

and constant) was obtained. A convenience sample facilitates the testing or exploration of certain hypotheses or different views of the phenomenon under investigation, usually at low cost (Ferber, 1977). The sample size of the three IV groups (none, occasional, and constant) were assessed. Results indicated that the sample size for this study was adequate to conduct two one-way ANOVAs. Results also revealed that the sample size was not equal across the three groups (none, occasional, and constant; see Table 5).

Linearity

The data were tested for linearity. Linearity of data tests the relationship between DVs and IVs. One of the assumptions of a one-way ANOVA is linearity of the data. The data for all three retail environments were entered into SPSS. Based on the one-way ANOVA Output table, deviation from linearity of 0.936 > .05 for DJSS and .188 > .05 for JPM. Based on this conclusion, there was a linear relationship among the variables of job satisfaction, job performance, and site setting.

Normality

Normality tests whether the variables are normally distributed. A Q-Q plot can be used with a data set to show normality. The result output is compared to a perfect diagonal line (y = x). An SPSS normality test was performed on the data from all three retail sites. Based on the SPSS output table, the DJSS variable was compared to a perfect diagonal line. The Q-Q plot of the DJSS variable was comparable to the perfect diagonal line (see Figure 1). The JPM variable was compared to a perfect diagonal line. The Q-Q plot of the JPM variable was comparable to the perfect diagonal line (see Figure 2).

Figure 1

Normal Q-Q Plot of DJSS

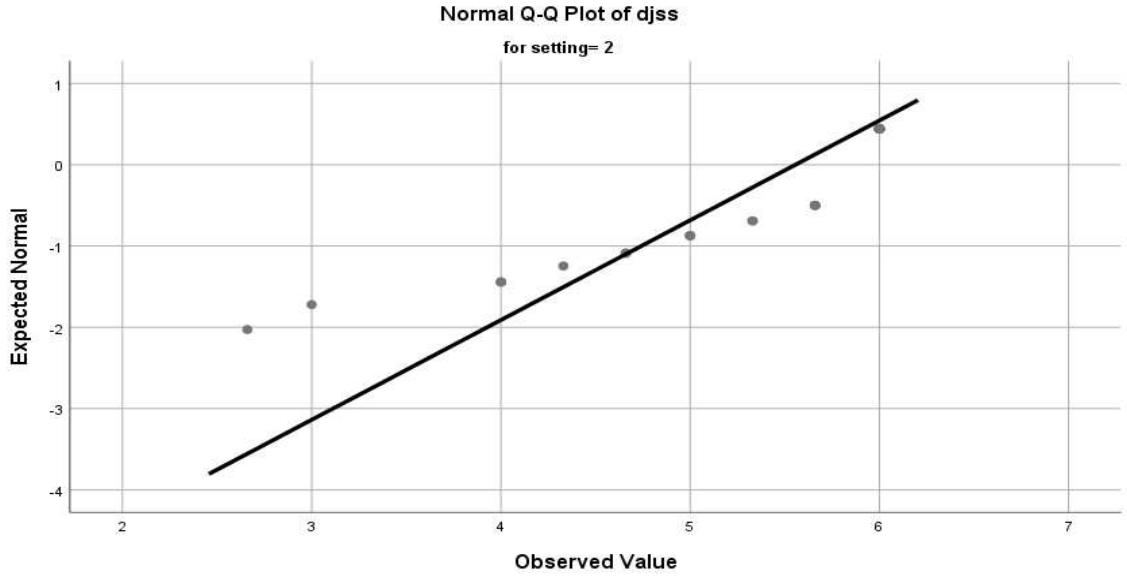
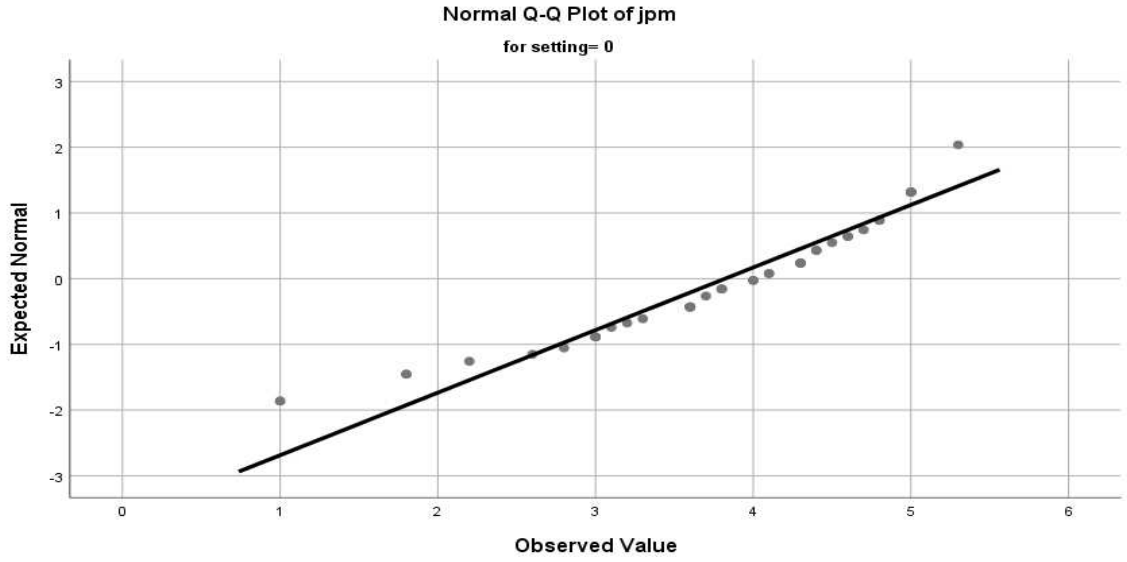


Figure 2

Normal Q-Q Plot of JPM



Homogeneity

The homogeneity of variance test measures the absolute mean differences between all scores and their group mean. This test can provide details about the data to see if a one-way ANOVA is the proper statistical test to run on a data set. A Levene's test in SPSS can determine if the variance is large or small. A Levene's test was conducted on the data set (see Table 14). Results of the Levene's test showed that the null hypothesis for the DJSS could be rejected, $F(2,130) = 9.896$, $p = .001$. Results of the Levene's test also showed that the null hypothesis for the JPM could be rejected, $F(2, 130) = 4.915$, $p = .009$. A study does not need equal population variances if it has approximately equal sample sizes. This study had three subgroups of 42, 45, and 46 participants, respectively, that were approximately equal.

Table 14

Test of Homogeneity of Variance

		Levene's statistic	*df*1	*df*2	Sig.
DJSS	Based on mean	9.468	2	130	.000
	Based on median	9.457	2	130	.000
	Based on median and with adjusted *df*	9.457	2	129.9	.000
	Based on trimmed mean	9.896	2	130	.000
JPM	Based on mean	4.887	2	130	.009
	Based on median	4.637	2	130	.011
	Based on median and with adjusted *df*	4.637	2	120.7	.011
	Based on trimmed mean	4.915	2	130	.009

Homogeneity of Covariance Matrices

An additional test can be used to test the homogeneity of covariance matrices. This assumption is that the vector of the DV follows a multivariate normal distribution. A Box's M test is used to estimate if two or more covariance matrices are equal. The Box's

M test is highly sensitive and a $p < .001$ would detect a distortion in the alpha levels (Hahs-Vaughn, 2016). Results of the composite DJSS and JPM scores showed that the Box's M value of 9.316 was associated with a p value of .028. As long as the p value is above .001, the assumption is met.

Table 15

Test Results of the Box's M

	Box's M	9.316
F	Approx.	3.025
	*df*1	3
	*df*2	3577009.275
	Sig.	.028

Note. Tests null hypothesis of equal population covariance matrices

Research Question Analyses

The results were used to examine the RQs. These tests were run in SPSS. A one-way MANOVA was run on composite scores on RQ1 (DJSS & JPM) to test if two or more groups were significantly different from each other in one or more characteristics. Based on the result of the MANOVA, one-way ANOVAs were run as step-down or follow-up analyses to examine RQ2 and RQ3. Composite scores of RQ2 (DJSS) were examined to determine if two or more groups were significantly different from each other. A post hoc criterion, a Tukey HSD test, was run to identify the group differences. A one-way ANOVA was run on composite scores from RQ2 (JPM) to determine if two or more groups were significantly different from each other. A post hoc criterion, A Tukey HSD test, was run to identify any group differences.

Research Question 1

How does the relationship between employee job satisfaction and job performance differ in retail environments with varied levels of HAIs? A one-way MANOVA was run. Composite DJSS and JPM scores were compared across three groups of employees from retail settings with different levels of animal presence: none, occasional, and constant. Results of the one-way MANOVA showed that there was a statistically significant difference in DJSS and JPM scores based on level of animal presence, $F(4,133) = 12.44$, $p < .0005$: Wilk's ^ = 0.703, partial ṅ2 = .000. This result indicated that the scores on the DJSS and JPM were dependent on level of animal presence ($p < .005$). Given the multivariate result, step-down ANOVAs also were conducted and evaluated within the MANOVA context to investigate the other two RQs.

Research Question 2

How does the level of HAIs at work influence the job satisfaction of employees in a retail environment? Table 16 shows the distribution of the retail workers' composite DJSS scores across the three retail settings regarding the presence of animals: none, occasional, and constant. The table provides descriptive statistics, including the mean, standard deviation, and 95% confidence interval for each retail setting as well as overall. The mean for the retail group with constant animal presence ($M = 5.56$, $SD = .82$) was larger than for the retail group with occasional animal presence ($M = 4.77$, $SD = 1.20$) and the retail group with none ($M = 3.87$, $SD = 1.43$).

Table 16

Distribution of Retail Workers' Composite DJSS Scores Across the Three Retail Settings

Retail setting	*n*	*M*	*SD*	*SE*	95% CI for M	
					Lower bound	Upper bound
None	45	3.87	1.43	.21	3.44	4.30
Occasional	42	4.77	1.20	.19	4.39	5.14
Constant	46	5.56	.82	.12	5.31	5.80
Overall	133	4.74	1.36	.12	4.50	4.97

As part of the MANOVA analysis, a step-down one-way ANOVA was run for the composite DJSS scores across the groups of employees working in retail settings with different levels of animal presence: none, occasional, constant. Table 17 presents the one-way ANOVA between-subjects effects for job satisfaction across the three retail settings. There was a statistically significant difference between retail settings for the DJSS, as determined by the one-way ANOVA, $F(2,130) = 23.612$, $p = .001$.

Table 17

One-Way ANOVA for Job Satisfaction Across the Three Retail Settings

	SS	*df*	*MS*	*F*	Sig.
Between groups	65.04	2	32.52	23.61	<.01
Within groups	179.05	130	1.38		
Total	244.09	132			

Table 18 presents the Tukey HSD post hoc comparisons of workers' job satisfaction in the three retail settings regarding presence of animals: none, occasional, and constant. A one-way ANOVA test can indicate if the results are significant overall. A Tukey HSD post hoc comparison reveals which specific group means compared with other means are significant. Results of the Tukey post hoc test showed that the scores on the DJSS retail with no animal presence (3.86 +/- 1.43, $p = .001$) were lower than the

DJSS retail scores with occasional (4.76 +/- 1.2, p = .001) and constant (5.5 +/- 1.53, p = .006) animal presence. These results showed that the null hypothesis for RQ1 could be rejected and that the level of HAIs in the retail settings of two or more groups did influence the job satisfaction of the employees.

Table 18

Tukey HSD Post Hoc Comparisons of Workers' Job Satisfaction Across the Three Retail Settings

Retail setting	Retail setting	*MD*	*SE*	Sig.	95% CI	
					Lower bound	Upper bound
None	Occasional	-.902	.252	.001	-1.500	-.305
	Constant	-1.690	.246	.001	-2.273	-1.107
Occasional	None	.902	.252	.001	.305	1.499
	Constant	-.788	.250	.006	-1.382	-.194
Constant	None	1.690	.246	.001	1.107	2.273
	Occasional	.788	.250	.006	.194	1.382

Research Question 3

How does the level of HAIs at work influence the job performance of employees in a retail environment? Table 19 presents the distribution of the workers' composite JPM scores across the three retail settings regarding presence of animals: none, occasional, and constant. It provides descriptive statistics, including the mean, standard deviation, and 95% confidence intervals, for each retail setting as well as overall. The mean for the retail group with constant animal presence (M = 4.55, SD = .625) was larger than for the retail group with occasional animal presence (M = 4.40, SD = .741) and with no animal presence (M = 3.84, SD = 1.018).

Table 19

Distribution of Workers' Composite JPM Scores Across the Three Retail Settings

Retail setting	*n*	*M*	*SD*	*SE*	95% CI	
					Lower bound	Upper bound
None	45	3.84	1.018	.152	3.54	4.15
Occasional	42	4.40	.741	.114	4.17	4.63
Constant	46	4.55	.625	.092	4.36	4.73
Overall	133	4.26	.862	.075	4.12	4.41

A one-way ANOVA was run for the composite JPM scores across groups of employees in retail settings with different levels of animal presence: none, occasional, and constant. Table 20 presents the one-way ANOVA between-subjects effects for job performance across the three retail settings. There was a statistically significant difference across retail settings for the JPM, as determined by a one-way ANOVA, $F(2,130) = 9.427$, $p = .001$.

Table 20

One-Way ANOVA for Job Performance Across the Three Retail Settings

	SS	*df*	*MS*	*F*	Sig.
Between groups	12.431	2	6.216	9.427	.000
Within groups	85.716	130	.659		
Total	98.147	132			

Table 21 presents the Tukey HSD post hoc comparisons of the workers' job performance in the three retail settings: none, occasional, and constant. Once again, a one-way ANOVA test can tell if results are significant overall. A Tukey HSD post hoc comparison reveals which specific group means compared with other means are significant. A Tukey post hoc test showed that the JPM scores for the retail group with no animal presence (3.84 +/- 1.01, $p = .005$) were lower than the scores for the JPM retail

group with occasional (4.40 +/- .741, $p = .005$) and constant (4.54 +/- .62, $p = .679$) animal presence. These results showed that the null hypothesis for RQ2 could be rejected and that the level of HAIs in the retail setting did influence the job performance of employees.

Table 21

Tukey HSD Post Hoc Comparisons of Job Performance Across the Three Retail Settings

Retail setting	Retail setting	*MD*	*SE*	Sig	95% CI	
					Lower bound	Upper bound
None	Occasional	-.558	.174	.005	-.971	-.145
	Constant	-.703	.170	.000	-1.107	-.300
Occasional	None	.558	.174	.005	.145	.971
	Constant	.145	.173	.679	-.556	.265
Constant	None	.703	.170	.000	.300	1.107
	Occasional	.145	.173	.679	-.265	.556

Summary and Transition

Chapter 4 included details about the prescreened descriptive sample and demographic data captured from 133 retail workers. The data were collected from participants employed in three retail settings: One setting had a policy of no animals permitted (none), one setting allowed animals because of its pet-friendly policy (occasional), and one setting allowed animals because of its product line (constant). There was a statistically significant difference among the retail settings for the JPM, as determined by a one-way ANOVA, $F(2,130) = 9.427$, $p = .001$, and there was a statistically significant difference among the retail settings for the JPM, as determined by a one-way ANOVA, $F(2,130) = 9.427$, $p = .001$. Tukey post hoc results indicated that the composite scores for both the DJSS and the JPM were higher for the “constant” retail setting than for the “occasional” and “none” retail settings. These results showed that the

null hypothesis for RQ1 could be rejected and that the level of HAIs in the retail setting of two or more groups did influence the job satisfaction of employees. These results also showed that the null hypothesis for RQ2 could be rejected and that the level of HAIs in the retail setting at work of two or more groups did influence the job performance of employees. A one-way MANOVA was run on RQ3. These results showed that DJSS and JPM scores were dependent on level of animal presence ($p < .005$). Presented in Chapter 5 are an interpretation of the findings, details about the limitations of the study, recommendations for future research, implications for social change, and a conclusion.

Chapter 5: Discussion, Recommendations, and Conclusion

Introduction

The purpose of this quantitative study was to explore the effect of HAIs in three retail settings (none, occasional, and constant regarding presence of animals) on employees' job satisfaction and performance. To date, these specific worker variables had not been studied in a retail setting. Job satisfaction was assessed using the DJSS, and job performance was assessed using the JPM.

The study addressed three RQs and their hypotheses:

RQ1: How does the relationship between employee job satisfaction and job performance differ in retail environments with varied levels of HAIs?

H_{01}: The relationship between employee job satisfaction, as measured by the DJSS, and job performance, as measured by the JPM, in retail environments with varied levels of HAIs (none, occasional, and constant) does not differ.

H_{a1}: The relationship between employee job satisfaction, as measured by the DJSS, and job performance, as measured by the JPM, in retail environments with varied levels of HAIs (none, occasional, and constant) differs.

RQ2: How does the level of HAIs at work influence the job satisfaction of employees in a retail environment?

H_{02}: The level of HAIs at work (none, occasional, and constant) does not influence the job satisfaction of employees, as measured by the DJSS, in a retail environment.

H_{a2}: The level of HAIs at work (none, occasional, and constant) influences the job satisfaction of employees, as measured by the DJSS, in a retail environment.

RQ3. How does the level of HAIs at work influence the job performance of employees in a retail environment?

H_{03}: The level of HAIs at work (none, occasional, and constant) does not influence the job performance of employees, as measured by the JPM, in a retail environment.

H_{a3}: The level of HAIs at work (none, occasional, and constant) influences the job performance of employees, as measured by the JPM, in a retail environment.

The assumption was that the workers' job satisfaction and job performance would be captured at the retail level. Job satisfaction and performance were expected to be higher in the retail setting that had a constant animal presence. The setting with occasional animal presence should statistically have had lower job satisfaction and performance results, and the retail setting with no animal presence should have shown the least statistical significance.

The statistical analysis used a one-way MANOVA for RQ1. Composite DJSS and JPM scores were compared across three groups of employees from retail settings with different levels of animal presence: none, occasional, and constant. SPSS was used for this analysis. The results of the one-way MANOVA show there was a statistically significant difference in DJSS and JPM scores based on level of animal presence, $F(4,133) = 12.44$, $p < .0005$: Wilk's ^ = 0.703, partial ṅ2 = .000. This result indicated that the scores on the DJSS and the JPM were dependent on level of animal presence

($p < .005$).

The statistical analysis used a one-way ANOVA for RQ2 and RQ3. Composite scores from the DJSS and the JPM were used in SPSS for this analysis. There was a statistically significant difference between retail settings for the DJSS, as determined by the one-way ANOVA, $F(2,130) = 23.612$, $p = .001$. There was a statistically significant difference among the retail settings for the JPM, as determined by a one-way ANOVA, $F(2,130) = 9.427$, $p = .001$.

Separate post hoc tests were completed on the DVs of job satisfaction and job performance. Independent *t* tests were run on each of the three groups for each DV. Family-wise error was addressed. A Tukey post hoc correction was used. Tukey post hoc results indicated that the composite scores for the DJSS and the JPM were higher for the "constant" retail setting than for the "occasional" and "none" retail settings.

Interpretation of the Findings

The retail store environment faces challenges that include smaller profit margins and keen competition in the marketplace (McLean, 2006). Donnely and Etzel (1977) added the challenges of employee theft, high turnover, and view of retail being a negative career choice. Employees play an important role in the success of retail businesses (Dubinsky & Hartley, 1986), so many companies are searching for ways to reduce employees' levels of stress and improve their morale. According to Olsen (2015), stressed workers tend to have higher levels of absenteeism and turnover rates. Both outcomes can cost companies billions of dollars in profit (Kudesia, 2010).

HAB refers to the connection that human beings form with animals (Fine & Beck, 2015). The HAB theory focuses on the physical, emotional, and psychological health benefits of animals on people (AVMA, 1998). HAB has been used in several settings, including hospitals, nursing homes, and the military, that reflect positive HAIs. For instance, Friedmann and Thomas (1995) found that pet ownership improved the recovery of myocardial infarction patients. Many older veterans have experienced improved levels of health and well-being when engaged in human-dog attachments (Krause-Parello, 2008).

Research on HAB has been limited in the workplace. Glenn (2013) researched elements of successful service dog partnerships in the workplace but cited the lack of research in the area of employment. More research is needed in other workplace environments to determine if HAIs can increase employees' wellness (R. T. Barker, 2005). Edwards et al. (2014) conducted one of the few workplace studies with animals. They reported that workplace staff felt more empowered after a 2-week exposure to fish in an aquarium.

The purpose of this study was to expand research on HAIs in the workplace. This study measured the effect of HAIs on the job performance and satisfaction of employees in the retail environment. The goal was to determine whether the positive effects of animal interactions identified in therapeutic settings can translate into positive employee outcomes in terms of job satisfaction and job performance in the retail setting.

The researcher explored the DVs of job satisfaction and performance in the retail setting to determine the positive effects of HAIs. Goyal and Gupta (2016) discussed the

importance of employee job satisfaction in the retail setting. Dubinsky and Hartley (1986) asserted that research on job performance at the retail level was lacking.

The participants were selected from three specific retail settings: One setting had a policy of no animals permitted (none), one had a pet-friendly policy (occasional), and one had a policy reflecting its product line (constant). Demographic data were captured on each retail setting for similarities in age, gender, level in retail organization, full- or part-time work status, and months of retail employment. For gender, female participants were predominant (n = 108; 72.0%), outnumbering male participants by a ratio of almost 3 to 1 (n = 38; 25.3%). In terms of race/ethnicity, the largest group of participants self-identified as White (n = 126; 84%). When broken down by age, the largest participant group was 18 to 24 years of age (n = 49; 32.7%). Most of the participants worked on a full-time basis (n = 96; 64.0%), but a significant number worked on a part-time basis (n = 51; 34.0%). Most participants had worked for their respective retail employers for a year or longer (n = 108; 72%), but some participants had been with their companies for a year or less (n = 39; 26%). Interpretation of these data was as follows: This was a narrow demographic sample from a limited geographic area.

The three-item DJSS allowed the respondents to self-report their job satisfaction. The means for all DJSS items for retail establishments with constant animal presence was higher than for retail establishments with occasional animal presence. The nine-item JPM allowed the respondents to self-report job performance. The means for all JPM items for retail establishments with occasional or constant animal presence were higher than for retail establishments with no animal presence. The level of HAI did influence the job

satisfaction and performance composite scores. For these results, workers in retail settings with constant animal presence had higher scores on the DJSS than workers in retail settings with occasional and no animal presence that captured their job satisfaction on that date. Workers in retail settings with constant animal presence had higher scores on the JPM than workers in the retail settings with occasional and no animal presence that captured their job performance on that date.

A one-way ANOVA was run for composite DJSS and JPM scores across groups from the three retail settings for RQ1 and RQ2. Composite scores for the DJSS and the JPM were used in SPSS for this analysis. There was a statistically significant difference among the retail settings for the DJSS, as determined by a one-way ANOVA, $F(2,130) = 23.612$, $p = .001$. There was a statistically significant difference among retail settings for the JPM, as determined by a one-way ANOVA, $F(2,130) = 9.427$, $p = .001$.

Tukey post hoc results also were run on the composite data for the DJSS and the JPM. Tukey post hoc results indicated that composite scores for the DJSS and the JPM were higher for the retail setting with constant animal presence than for the retail settings that had occasional and no animal presence. Interpretation showed that the null hypothesis for RQ1 could be rejected and the level of HAIs in the retail setting of two or more groups did influence the job satisfaction of employees. The results showed that the null hypothesis for RQ2 could be rejected and the level of HAIs in the retail setting did influence the job performance of employees. A one-way MANOVA was run for composite scores on DJSS and JPM across groups from the three retail settings for RQ3. The DJSS and JPM scores were dependent on the level of animal presence ($p < .005$).

Limitations of the Study

Data collection using surveys might have led to a limitation of internal validity. Survey answers can be dishonest based on fear. Data collected about work environments may lead to faulty answers based on participants' fear of employer retaliation. The respondents in the study may have feared that giving honest answers about the workplace could have resulted in disciplinary actions or termination.

Other study limitations relevant to participant demographics were identified during the analysis of the data. Most of the respondents were female participants and did not represent other genders. Most respondents ranged in age from 18 to 24 years, highlighting the underrepresentation of other age groups. Most participants had worked for their retail employers longer than a year and were full-time employees. The ethnic background of most participants was White. All of these factors meant that the sample was not representative of the entire retail target population. The data may not be generalizable to all workers.

Data collected from each participant for just one retail workday may have distorted the data. Data collected over several days may have produced different responses. This study data may not be generalized to worker emotions for a long period of time. Other limitations were the retail-only setting in which the study was conducted and the IVs (i.e., job satisfaction and job performance) that were investigated. These research findings are limited in scope including these two parameters and not expanding to other areas of the retail worker profile. The results of this study may not be generalizable to all workplaces, nor can they be generalized to all worker emotions.

The instruments used in this study to measure employees' job satisfaction and job performance also could have been other limitations. The DJSS and the JPM are older instruments, and no data on the composite scores on these instruments were available. Using more recent instruments measuring job satisfaction and performance may have been more suitable in yielding composite scores for individual questions. Composite scores from individual questions on the DJSS and the JPM were used for the calculations in this study. Researcher human error may alter the trustworthiness of these calculations. This study data may not be generalized to all job satisfaction and performance instruments.

Subsample group size was another limitation. Geographic limitations also may have been a factor. Responses were collected without capturing location as a demographic, so it is unknown where the retail workers were located. These results may not be generalizable to all retail workers.

Recommendations for Future Research

There is a need for creative ways to improve employees' job satisfaction and job performance. One strength of this study is that the results will add to current knowledge about three retail work environments: no presence of animals, occasional presence of animals, and constant presence of animals. These specific retail settings had not been studied previously.

Because research on HAI and the workplace has been scant, a strength of this study was the use of instruments that specifically measured job satisfaction and job performance. A strength of this study was the use of valid and reliable instruments, the

DJSS and the JPM. These instruments have captured valid and reliable job satisfaction and job performance results in other workplace settings. One weakness of this study was its restriction to a limited sample. Further research is needed on diverse ethnic samples to see if the results can be replicated. Obtaining participants from a small geographic area also decreased the generalizability of the results. Expansion to other areas of the United States or other countries is recommended.

Potential participants responded slowly to indicate their willingness to join a nonfunded study. Data collection took 6 months. One recommendation is to offer monetary incentives to interested individuals more quickly to obtain their willingness to be in studies. This study was limited to the retail workplace. One recommendation is to conduct similar studies in workplaces with diverse workforces. The last recommendation is to use more current instruments with composite scores provided. The DJSS and the JPM are valid and reliable, but newer instruments designed specifically to measure job satisfaction and job performance may yield different results.

Implications for Social Change

Results indicated that one creative way to improve employees' job satisfaction and performance may be HAI. Results of other studies have indicated that HAI has had positive results in situations ranging from calming children in hospital to assisting adults sealing with mental health issues. The workplace has been one area that has received a paucity of attention. R. T. Barker (2005) called for more research to determine if HAI may improve employees' wellness. This study expands on past research to provide more

information on organizations, retail workers, HAI, and employees' job satisfaction and job performance.

This study adds to the body of knowledge on HAI in the retail setting. Results showed that the null hypotheses for RQ1 and RQ2 could be rejected and the level of HAI in the retail setting of two or more groups did influence the job satisfaction and job performance, respectively, of employees. The results for job satisfaction and performance could be used by managers as a guide to seek creative options in the retail environment.

Conclusions

The retail work environment faces many daily challenges, two of which are finding ways to improve employees' job satisfaction and job performance. The limited findings may offer retail managers a way to boost employees' job satisfaction and performance and improve the retail status in the marketplace.

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Appendix A: Demographic Questionnaire

Directions: Please fill in or check the following items to best characterize you and your current job in retail

Demographics

Age: ____ (Rounded in Years)

Gender (Check one or fill in as appropriate):

___Male

___Female

Other_____

Education Level (Check the one that best files you):

___Less than High School

___High School/GED

___Some College/Associates

___College Degree or Greater

Job Information

Position with Retail Company (Check the one that best fits your job or fill in title):

____ Retail Cashier

____ Retail Sales floor Associate

____ Retail Stockperson

____ Retail First-line Supervisor

____ Retail Assistant Store Manager

____ Retail Store Manager

Other_____

Time with the Retail Company:

Years_____ Months____

Retail Employment Status:

___ Part Time

___ Full Time

Retail Setting:

___ No Pets Policy

___ Pet Friendly Animal Policy

___ Pet Store/Department

Appendix B**:** Instruments

Daily Job Satisfaction Scale

The DJSS contains three items that allow the respondents to self-report job satisfaction. The items are ranked on a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*).

Items:

1. At present, I am satisfied with my job.
2. Right now, I like my job.
3. At this moment, I like working here.

Validity and Reliability:

The DJSS was developed to measure daily job satisfaction (Loi et al., 2009). The DJSS is a scale of the Michigan Organizational Assessment Questionnaire Job Satisfaction Subscale (MOAQ-JSS; Bowling & Hammond, 2008). Bowling and Hammond (2008) conducted a meta-analysis of the MOAQ-JSS and found it to be a valid and reliable measure of job satisfaction. The sample-weighted internal consistency reliability was .84 ($k = 79$, $N = 30{,}623$). The mean sample-weighted test-retest reliability was .50 ($k = 4$, $N = 746$). Loi et al. (2009) conducted reliability data on the DJSS to estimate daily job satisfaction and found the reliability alpha = .96.

Job Performance Measure

The JPM contains nine items that allow the respondents to self-report job performance. The items are ranked on a 5-point Likert scale that ranges from 1 (*totally not applicable*) to 5 (*totally applicable*).

Items:

1. Today, I achieved the objectives of my job.
2. Today, I have met my criteria for job performance.
3. Today, I demonstrated expertise in all job-related tasks.
4. Today, I fulfilled all the requirements of my job.
5. Today, I could manage more responsibility than typically assigned to me.
6. Today, I appeared to be suitable for a higher level role.
7. Today, I was competent in all areas of the job, and handled tasks with proficiency.
8. Today, I performed well in the overall job by carrying out tasks as expected.
9. Today, I planned and organized to achieve objectives of the job and meet deadline.

Validity and Reliability:

The JPM was developed from the task-based Job Performance Scale (Goodman & Svyantek, 1999). The purpose of the JPM is to assess job performance. Reliability conducted on the JPM yielded a Cronbach's coefficient alpha from the baseline instrument of .82 (Onwezen et al., 2014) Coefficients collected on Day 1 yielded .85, Day 2 yielded .90, and Day 3 yielded .88, respectively. This instrument was surveyed on nonprofit workers in The Netherlands (Onwezen et al., 2014).

Appendix C: Permission to Use Instruments

Permission to Use the Daily Job Satisfaction Scale

Test content may be reproduced and used for non-commercial research and educational purposes without seeking written permission. Distribution must be controlled, meaning only to the participants engaged in the research or enrolled in the educational activity. Any other type of reproduction or distribution of test content is not authorized without written permission from the author and publisher. (Daily Job Satisfaction Scale [Database record]. Retrieved from PsycTESTS. doi:http://dx.doi.org/10.1037/t08646-000)

Permission to Use the Job Performance Measure

Date: July 10, 2018
From: Michelle E. Davis
To: Marleen Onwezen

Subject: Request to Use Job Performance Measure in PhD Dissertation

Hi, I am emailing to ask permission to the Job Performance Measure as part of the my proposed study. I am a PhD student at Walden University in the United States. I appreciate the hard work it took to develop your survey and would be honored to use it as part of my research. Thank you for your time.

Michelle E. Davis

Date: July 11, 2018
From: Marleen Onwezen
To: Michelle E. Davis

Subject: Request to Use Job Performance Measure in PhD Dissertation

Dear Michelle, Thanks for your email. It is fine by me if you use my measurements (of course with proper citations). Best of luck with your thesis!

Marleen Onwezen