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## Covid-19 and Canine Travelers: Determining Likelihood to Travel with Dogs

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COVID-19 AND CANINE TRAVELERS:  
DETERMINING LIKELIHOOD TO TRAVEL WITH DOGS

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A Thesis  
Presented to  
the Graduate School of  
Clemson University

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Science  
Parks, Recreation, and Tourism Management

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by  
Angela Sue Rowan  
May 2022

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Accepted by:  
Dr. William Norman, Committee Chair  
Dr. Lauren Duffy  
Dr. Carol Kline

## ABSTRACT

During the Covid-19 pandemic, dog adoption rates skyrocketed, restaurants focused on outdoor seating, and travelers pivoted away from tightly packed planes out of safety concerns. This study surveyed dog owners in the United States to determine whether pet attachment levels could predict dog owners' likelihood of traveling with their dogs. In addition, it used Um and Crompton's (1992) facilitators and inhibitors to establish how different factors affect a dog owner's likelihood of traveling with their dog. These facilitators and inhibitors were split into three dimensions: needs satisfaction, social agreement, and travelability. Finally, this study sought to learn what effect the Covid-19 pandemic had on the participants likelihood of traveling with their dogs after the pandemic. The likelihood of traveling with a dog was divided into four trip types: visiting friends and family, recreation trip, day trip, and overnight trip. Survey results show that pet attachment had a positive significant relationship with the likelihood to visit friends and family with a dog. Needs satisfaction dimension of facilitators and inhibitors also had a positive significant relationship with likelihood for owners to take any of the four types of trips with their dog.

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## CHAPTER ONE

### INTRODUCTION

#### **Background**

It is estimated that 89.7 million dogs are owned in the United States (“Pet Ownership Statistics,” 2022). If you compare that to the number of people in the U.S., it reflects that almost one-fourth of the population are dog owners. According to a survey conducted in the United States by the online tourism company Pets Jets (2020), the number of pet owners that travel with their dog(s) has grown over the years. In 2020 they estimated 53% of travelers take vacations with their pets (“Pet Travel Trends 2020”, 2020). As pet travel has grown, so too have the number of locations willing to accommodate owners and their pets. However, pet owners still wish to see more pet-friendly businesses and public spaces (“Pet Travel Trends 2020”, 2020).

While there are many dog owners who travel with their pets, there are still many that choose not to – understanding why pet owners choose to travel with dogs is a central question within this study. Hung et al. (2016) found pet attachment has a positive effect on a dog owner’s motivations to bring their dog to tourism activities, such as tours or hikes. Pet attachment is defined as the amount of affection between an individual and their companion animals. Pet attachment is crucial to gauge how pet owners will interact with their pets and to determine their relationship (Hung et al., 2016 ). The stronger their attachment to their dog, the more motivated they are to attend activities with them. There are three types of motivated pet owners who travel with their pets: human-pet-relationship-oriented, pet owner-oriented, and pet benefits-oriented (Tang et al., 2022). A

traveler who is human-pet relationship-oriented will travel with their dog because they want to improve their level of pet attachment; a pet owner-orientated traveler will travel with their pet because it gives them a sense of novelty; and a pet benefits-oriented traveler will travel with their pet because they want to reciprocate the love and devotion their pet has given them (Tang et al., 2022). A pet owner's strong emotional attachment to their pets is an opportunity for tourist locations and activities to advertise the benefits for both human and pet to stimulate the owner's motivation to travel with their pet (Hung et al., 2016).

When travelers are making the decision of where to visit, they are influenced by *facilitators* and *inhibitors* (Um & Crompton, 1990). A facilitator is a factor that makes a traveler more likely to visit a destination, while an inhibitor is a factor that makes a traveler less likely to visit a destination. Facilitators and inhibitors may also affect travelers' decisions, such as whether to bring their dog with them on vacation.

Determining what factors act as a facilitator or inhibitor to pet owners can help the tourism and hospitality industry to cater to their customer of choice. Specifically, these factors are broken into three dimensions: *needs satisfaction*, *social agreement*, and *travelability* (Um & Crompton, 1990). Needs satisfaction is a traveler's decision to travel for novelty, relaxation, and learning; social agreement is how the traveler is influenced by social norms; and travelability is the traveler's tendency to make travel decisions based on time, money, and health (Um & Crompton, 1990).

A common resource that travelers use for planning is the smartphone. By using a variety of applications (i.e., 'apps') on their smartphone, travelers are able to visit more

places and have better experiences (Huang et al., 2017). That is, the purpose of the smartphone has evolved over time through private market designers who customize and personalize millions of apps which are significant to the smartphone's adoption in our daily lives, including before, during and after travel (Harmon & Duffy, 2021). There is a wide range of apps that travelers can use to improve or otherwise inform their experiences, such as the National Park Service app that provides users the fees, hours, news, and events for any National Park (Rosenbloom, 2021 ). Apps such as TripAdvisor (tripadvisor.com) allow travelers to find deals on hotels and experiences while giving users a platform to review the businesses and allow them to visit new and different places. For pet owners who travel with their pets, the free app BringFido (bringfido.com) is a useful resource. BringFido helps users connect with pet-friendly hotels, restaurants, outdoor spaces, and events. It also helps users book a pet-friendly hotel through their app. Users can then leave reviews of hotels, restaurants, and attractions for other pet owners to reference when planning their trips.

With the outbreak of the severe acute respiratory syndrome coronavirus two (SARS-CoV-2), better known as the Covid-19 pandemic since the beginning of 2020, many businesses have had to alter their services. For example, restaurants started using more outdoor seating, which may offer dog owners the opportunity to bring their dog along while they go out to eat. Covid-19 has created a change in travelers as well, causing RV and camper sales to surge (Green, 2020). These shifts theoretically make it easier for dog owners to travel with their dog(s) on overnight trips since they can worry less about finding pet-friendly accommodations or paying pet fees. In this regard, Covid-19 has led

to changes that affect the pet-associated travel industry, and it is important to understand the trends in travel behavior in the post-pandemic world. A 2021 study by Rahman et al. explored the effects of Covid-19 on tourists' perceptions of travel and risk management and found they were greatly affected by the Covid-19 pandemic (Rahman et al., 2021). Given the results of this study, we can better understand in what ways the pandemic has affected pet travel.

An online survey distributed to users of BringFido ([bringfido.com](https://bringfido.com)), a website and app with over 100,000 downloads, was used to collect data from those that booked a pet-friendly hotel through BringFido during the six months prior to this study, in October 2021 during the Covid-19 pandemic. This study investigates whether pet attachment levels affect a dog owner's likelihood to travel with their dog. It also assesses the traveler's facilitators and inhibitors when traveling with their dog to determine whether these factors affect a dog owner's likelihood to travel with their dog. Finally, this study examines what types of trips dog owners in the United States took throughout the Covid-19 pandemic and their likelihood to travel post-Covid-19 to learn if there is a change in their travel behaviors. The likelihood to travel with a dog was split into four pleasure and personal trip types based on Sung et al.'s (2001) study: visiting friends and family, recreation trip, day trip, and overnight trip. This is because there are different needs associated with each of these trip types. For example, an overnight trip requires accommodations, and a recreation trip requires a recreation space. Past trip experience was used as a control variable for the study.

## **Problem Statement**

Covid-19 flipped the tourism world upside down, reshaping human behavior in ways we are still trying to understand. As behavior changes, data is needed to not only learn what the future of travel will look like, but how it looks during a pandemic. With the pet tourism market growing, it is important to collect data about travelers and their likelihood to travel with their dog to grow the industry. There is a high desire in the tourism industry from tourists to travel with their pets, but most travelers are unaware of pet friendly accommodations. Pet owners have the potential to be a significant and lucrative tourism market because of their willingness to pay for their pets (Carr & Cohen, 2009). This study attempts to fill the gap in pet tourism research in regard to pet owners' likelihood to travel with a pet in the future.

## **Purpose Statement**

Pet travel has grown over the years and more people have become aware of pet friendly travel opportunities. Before the pandemic, a study found 37% of families travel with their canine family members, a 19% increase over the past decade ("Pet Travel", 2020). This increase offers an opportunity for businesses to enter a promising niche market. In addition, 23 million households in America added "pandemic pets" to their families, which are pets they adopted during the pandemic due to more time alone and at home (Bogage, 2022). The large influx of pets may have caused the pet travel industry to grow as a result.

The purpose of this study is to determine a dog owner's likelihood to travel after the Covid-19 pandemic with their dog. It looks at whether pet attachment levels influence

a dog owner's likelihood to travel with their dogs on the four personal or pleasure trips: visiting friends and family, recreation, day trip, and overnight trip. It also investigates what factors dog owners consider to be facilitators and inhibitors, and whether these factors affected their likelihood to travel with their dog. These factors are separated into needs satisfaction, social agreement, and travelability to view their individual influences. Finally, this study examines how the participants' travel behavior was affected by the Covid-19 pandemic, and whether this change effected their likelihood of traveling with their dog.

### **Research Questions**

The purpose of this study was to answer three research questions:

1. How does pet attachment affect a traveler's likelihood to travel with their dogs?
2. What facilitators and inhibitors affect a dog owner's likelihood of traveling their dog when taking a pleasure or personal trip?
3. How did Covid-19 affect a traveler's likelihood of traveling with their dog?

### **Research Hypotheses**

This study sought to answer these questions by focusing on the following hypotheses (See Figure 1):

Hypothesis 1: Pet attachment has a significant positive influence on the likelihood of a dog owner to take a pleasure or personal trip with their dog.

1A : Pet attachment has a significant positive influence on the likelihood of a dog owner to travel with their dog when taking a trip to visit friends and family.

1B : Pet attachment has a significant positive influence on the likelihood of a dog owner to travel with their dog when taking a recreational trip.

1C : Pet attachment has a significant positive influence on the likelihood of a dog owner to travel with their dog when taking a day trip.

1D : Pet attachment has a significant positive influence on the likelihood of a dog owner to travel with their dog when taking an overnight trip.

Hypothesis 2 : Needs satisfaction has a significant positive influence on a dog owner's likelihood to travel with their dog.

2A : Needs satisfaction has a significant positive influence on a dog owner's likelihood to travel with their dog when visiting friends and family.

2B : Needs satisfaction has a significant positive influence on a dog owner's likelihood to travel with their dog when taking a recreational trip.

2C : Needs satisfaction has a significant positive influence on a dog owner's likelihood to travel with their dog when taking a day trip.

2D : Needs satisfaction has a significant positive influence on a dog owner's likelihood to travel with their dog when taking an overnight trip.

Hypothesis 3 : Social agreement has a significant positive influence on a dog owner's likelihood to travel with their dog.



3A : Social agreement has a significant positive influence on a dog owner's likelihood to travel with their dog when visiting friends and family.

3B : Social agreement has a significant positive influence on a dog owner's likelihood to travel with their dog when taking a recreational trip.

3C : Social agreement has a significant positive influence on a dog owner's likelihood to travel with their dog when taking a day trip.

3D : Social agreement has a significant positive influence on a dog owner's likelihood to travel with their dog when taking an overnight trip.

Hypothesis 4 : Travelability has a significant negative influence on a dog owner's likelihood to travel with their dog.

4A : Travelability has a significant negative influence on a dog owner's likelihood to travel with their dog when visiting friends and family.

4B : Travelability has a significant negative influence on a dog owner's likelihood to travel with their dog when taking a recreational trip.

4C : Travelability has a significant negative influence on a dog owner's likelihood to travel with their dog when taking a day trip.

4D : Travelability has a significant negative influence on a dog owner's likelihood to travel with their dog when taking an overnight trip.

Hypothesis 5 : The Covid-19 pandemic has significant positive effect on a dog owners' likelihood to travel with their dog.

5A : The Covid-19 pandemic has a significant positive effect on the likelihood of dog owners traveling with their dog when taking a trip to visit friends and family.

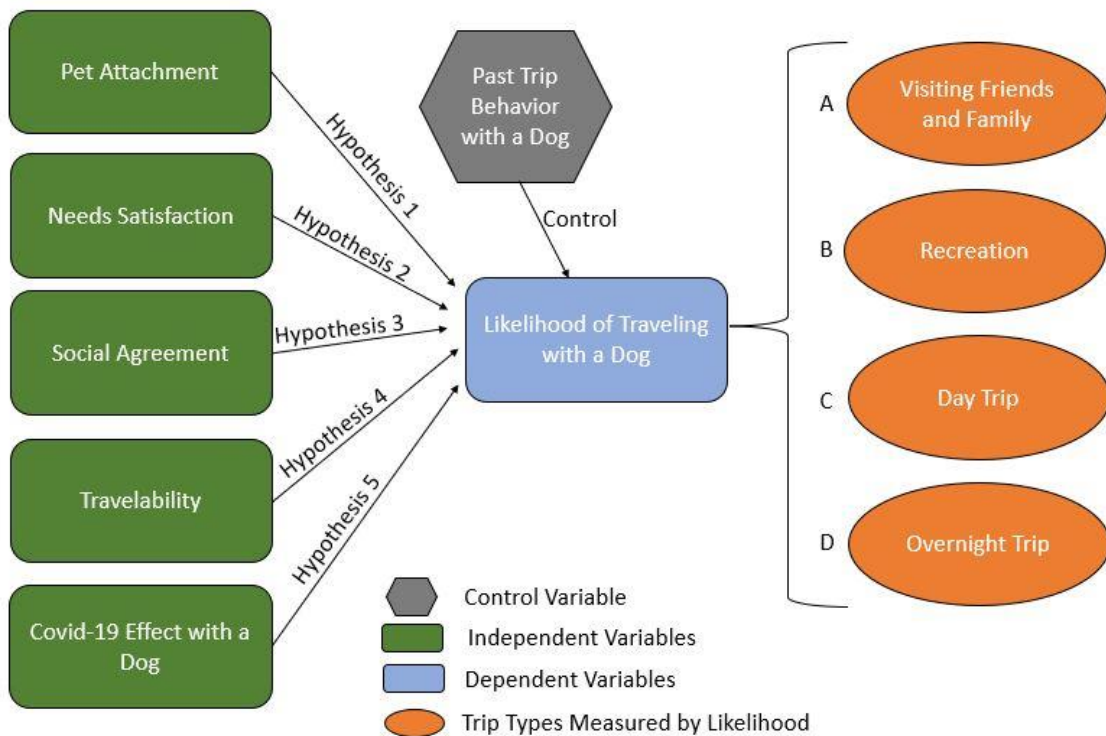
5B : The Covid-19 pandemic has a significant positive effect on the likelihood of dog owners traveling with their dog when taking a recreational trip.

5C : The Covid-19 pandemic has a significant positive effect on the likelihood of dog owners traveling with their dog when taking a day trip.

5D : The Covid-19 pandemic has a significant positive effect on the likelihood of dog owners traveling with their dog when taking an overnight trip.

**Figure 1**

*Hypothesis Model*



## **Variables**

This study looked at five independent variables, one control variable and one dependent variable. The control and dependent variables were separated into four trip types. (See Figure 2)

### *Independent Variables*

The independent variables in this study were pet attachment, needs satisfaction, social agreement, travelability, and the Covid-19 effect. The pet attachment variable reflects the work of the Hung et al. (2016) study; the same four questions were used in this study to determine the participants level of attachment to their dog. The facilitators and inhibitors variables came from Um and Crompton's (1992) study. This variable was split into three dimensions: social agreement, needs satisfaction, and travelability. The Covid-19 effect variable was specifically developed for this study. It was used to determine how the pandemic had affected the participants willingness to travel with a dog and it includes all aspects of traveling with a dog.

### *Control Variable*

Past trip behavior was used as a control variable in this study. It is well known that past trip behavior is the best predictor of future trip behavior (Lehto et al., 2004). Past trip behavior data was collected for four trip types: visiting friends and family, recreation trips, day trips, and overnight trips. These trip types were based on the Sung et al. (2001) study.

### *Dependent Variables*

The dependent variable in this study was the likelihood of traveling with a dog after the Covid-19 pandemic. Likelihood was found through several questions using a 5-point Likert-type scale from Vagias (2006). The dependent variable was separated into four types of trips: visiting friends and relatives, recreation trips, day trips, and overnight trips (Sung et al., 2001). From these four trip types, four models were created to determine the how each independent variable effected likelihood of each of the four trip types.

### **Operational Definitions**

#### *Pet Attachment:*

The amount of affection between an individual and their companion animals. Pet attachment is crucial to gauge how pet owners will interact with their pets and to determine their relationship (Hung et al., 2016).

#### *Facilitators:*

A factor in the traveler's decision-making process that will encourage them to make a certain decision. (Um & Crompton, 1992)

#### *Inhibitors:*

A factor in the traveler's decision-making process that will deter them from making a certain decision. (Um & Crompton, 1992)

*Needs Satisfaction*

A traveler's motivation to travel to certain location and participate in certain tourism activities based on novelty, challenge, relaxation, learning, and curiosity (Um & Crompton, 1992).

*Social Agreement:*

A traveler's preference to behave in a way that reflects their social groups opinions (Um & Crompton, 1992).

*Travelability:*

A traveler's ability to visit certain locations in reference to money, time, skill, and health (Um & Crompton, 1992).

*Covid-19 Effect:*

A possible change in behavior due to the outbreak and ongoing situation of the Covid-19 pandemic.

*Past Trip Behavior:*

A traveler's decisions and actions while they traveled.

*Likelihood:*

The probability that something will happen (Merriam-Webster, n.d.).

*Personal or Pleasure Trips:*

A trip in which the travelers spend their own time and money to travel. Consists of four trip types: Visiting friends and family, recreation trip, day trip, and other (Sung et al., 2001).

*Visiting Friends and Family trip*

A trip in which an individual travels away from their usual habitat in order to see friends and/or family.

*Recreation Trip*

A trip in which an individual travels away from their usual habitat in order to participate in recreational activities.

*Day Trip*

A trip in which an individual travels away from their usual habitat to participate in tourism and returns home within the same day.

*Overnight Trip*

A trip in which an individual travels away from their usual habitat to participate in tourism activities and stays overnight somewhere other than their home.

## **Thesis Outline**

The content of this thesis is organized as follows:

- Chapter Two is the literature review and discusses research pertaining to this study. This includes pet travel, the traveler's decision-making process, and trip behavior.
- Chapter Three presents of the process in which data was collected for this survey and how it was analyzed. This chapter includes an in-depth description of the survey instrument.
- Chapter Four reveals the results of the study including the profile of the respondents and the hypotheses.
- Chapter Five reviews the study, how it can be used, and how this niche research area should move forward.

## CHAPTER TWO

### REVIEW OF THE LITERATURE

#### **Animals in Tourism**

Animals can be found in both the supply and demand sides of tourism. On the supply side animals can be found in many different areas of the tourism experience, some examples include culinary tourism, sport hunting, and wildlife tourism (Wright, 2018). Culinary tourism is where travelers visit different cultures to try authentic or unique restaurants as well as foods and drinks. Fish, cows, and chicken are animals that are commonly seen in food tourism, although there are many different animals that can be used (Wright, 2018). Sport hunting in tourism is when an individual pays money to hunt wild animals, usually deemed “exotic” by Western standards (Wright, 2018). Some examples of this are guided elk hunting in Montana, USA or hunting reserves in Botswana and Namibia. Wildlife tourism is the viewing of non-domesticated animals that are in the wild or in enclosures (Wright, 2018). They can be seen on wildlife tours, such as a whale watching tour, or individually, for example during back country recreation. They can also be viewed in captive environments such as a zoo or aquarium. The majority tourists do not make the effort to see animals in the wild (Cohen, 2009), but rather they like the ease and accessibility of zoos and aquariums. When viewing wildlife, tourists would rather see animals that behave similarly to humans such as nurturing offspring, being sociable, and displaying similar family values (Cohen, 2009).

In Finland, animal-based tourism on the supply side has been known to generate 15 million euros a year (Bohn et al., 2018). Many of their popular tourism experiences



include reindeer; suppliers offer reindeer safaris and restaurants create dishes with reindeer meat. A tourist could also find many souvenirs created from reindeer antlers, hide, and more (Bohn et al., 2018). Dog sledding is another popular tourism experience in northern tourism areas where tourists ride in a sled or even drive a sled that is pulled by dogs. This experience relies heavily on the dogs who co-create the experience for the tourist (Bertella, 2014). Tourists want to spend time with the dogs and get to know them instead of just hopping on the sled (Bertella, 2014). A similar co-created experience is Icelandic horse tourism. Tourists have the opportunity to ride the unique Icelandic horse for as little as a half-hour and up to ten days across Iceland (Sigurðardóttir & Steinthorsson, 2018). The horse tourism community in Iceland has grown rapidly and is considered the greatest opportunity for the development and prosperity for their horse industry (Sigurðardóttir & Steinthorsson, 2018).

On the demand side of tourism, a common example is horse, or equestrian tourism. Tourists do not wish to simply travel on horseback, but to travel with horses (Notzke, 2019). Trips on horses can take days, or even weeks. During that time the horses are willing partners in the travel experience (Notzke, 2019). A version of this is trail riding, which is usually done by travelers who already own horses. Individuals will trailer their horse to a recreation area and will ride anywhere from a few hours to several days, often with a group of friends (Kline et al., 2015). Horses may also be transported to compete in competitions (Sigurðardóttir & Steinthorsson, 2018). In all of these scenarios, the horses are the ones doing the traveling with their owners.

Service animals are another type of animal traveler on the demand side. Service animals can include a variety of species including dogs, pigs, turkeys, tortoises, and miniature horses (Rickly, 2018; Semmel, 2002). These animals assist those with varying disabilities to lead more mobile lives, which allows them to travel more often (Rickly, 2018). Travelers with service animals may not be able to travel without their animal. In the Rickly (2020) study, it was found the majority of tourists with guide dogs bring their dogs on overnight trips “always” or “fairly often” (Rickly et al., 2020). Despite frequent travel of service animals, tourists encounter several barriers while traveling with their animals such as a lack of staff knowledge, a lack of accessible services, and a lack of awareness of the right to “reasonable adjustment”(Rickly et al., 2020). There is little research done on how transportation services, accommodations, and tour operators handle and provide for service animals that travel with their owners (Rickly, 2018).

Pet tourism is a fast-growing segment of the demand side of tourism, specifically dog tourism (Chen et al., 2014). Many dog owners want to bring their dogs along with them on vacation as they consider their dogs as a member of the family. They will view themselves as dog parents and their dogs as their “fur babies” (Greenebaum, 2004). These dog parents expect their dogs to be treated as a member of the family by staff and other guests while on vacation (Carr, 2017). Yet, bringing a dog along on vacation requires addition planning to avoid constraints, which can be challenging for some. Examples of constraints may be the dog’s lack of agility physically or destination restrictions (Chen et al., 2014). Dog owners may also be worried about disturbing other travelers or whether others would mind a dog attending tourism activities (Chen et al.,

2014). Businesses could also prohibit dogs for the health and welfare of guests and to protect the local flora and fauna (Carr, 2017). The more constraints present, the less likely dog owners are to travel and participate in tourism activities with their pets (Chen et al., 2014). Nevertheless, dog owners that feel deeply connected to their dogs are more willing to overcome these constraints in order to travel with their “fur babies” (Kirillova et al., 2015; Greenebaum, 2004).

Many tourism companies use animals in their advertisements to attract certain audiences. For example, in Lapland, Finland, reindeer and huskies are often used in branding because they are some of the most popular attractions (Bohn et al., 2018). The use of animals in advertising has been proven to inspire good feelings about a brand or company (Lancendorfer et al., 2006). How animals are used in advertisements depends on the type of animal (Bertella, 2013). Fish are often shown dead in advertisements because they are considered commodities. Dogs and horses are usually touching a human in advertisements because they are domesticated and often considered pets, or even family members. Other animals, such as seals, are viewed as wild and free because the possibility of interacting with them are slim (Bertella, 2013). The age and gender of the target audience determines how the animals are seen as well. For men, animals are shown being dominated by a male. For women and children, animals are shown being cared for by someone (Bertella, 2013). Companies may not always use promotional pictures that accurately represent the local culture (Bertella, 2013).

The future of wildlife tourism will likely look quite different than it does today. As animal species continue to decrease, cloning may become a way to preserve them. For

example, endangered species of fish may be cloned in the food tourism industry (Wright, 2018). Tourists would have the opportunity to pre-order an extinct or endangered fish for a high price. Likewise, hunting reserves may clone extinct or endangered animals for tourists to hunt them at a steep price (Wright, 2018). Zoos and aquariums may also use cloning to keep certain species alive. They could use these cloned animals as an opportunity to educate the public (Wright, 2018). These business opportunities could offer a unique experience at a high price for tourists, since there would be a limited supply (Wright, 2018). Additionally, the onset of the COVID-19 pandemic has changed the tourism industry. With the sharp decline in tourism, animal tourism companies have taken a hit to their income. There is a fear that animals will suffer as companies who take care of captive animals have trouble affording to feed them (Fennell & Sheppard, 2020). As these businesses struggled there was a possibility they permanently closed. The future may see fewer opportunities for tourists to engage with animals on the supply side.

### **Pet Travel**

While owning a pet is a lot of responsibility, it also provides many benefits. Pets allow their owners to become happier and healthier individuals. For example, many dog owners are more physically active due to having to walk and exercise their dog (Dilek et al., 2020). Being more physically active leads to fewer doctor visits and a lower body mass index (Dilek et al., 2020). In older adults, this can reduce the risk of hip fractures (Serpell, 1991). Dogs also can be beneficial for mental health. Hui Gan et al., (2019) states they lower the risk of anxiety because they offer a sense of safety, especially for adults who may live alone. They offer emotional health benefits as well. Dog owners are

known to be less lonely and depressed while having a greater level of self-esteem and happiness. Dog owners are more conscientious, have a greater well-being, and are less fearful and preoccupied (McConnel et al., 2011). Pet ownership facilitates recovery and coping skills in adults with mental illness (Hayden-Evans et al., 2018). It gives them a sense of purpose and accomplishment every day when they complete various pet-related tasks. This results in an overall optimistic attitude about life that positively influences mental health in adults (Hui Gan et al., 2019).

Many owners have relationships with their dogs that are remarkably similar to friendships between humans (Kurdek, 2008). Owners who have a strong attachment to their pets are more likely to bring them along to a leisure activity. Those who are confident in their abilities, have a positive attitude, and have a supportive social environment are more likely to travel with their pets as well (Chen et al., 2011). Many pet owners see their dogs as their children. When dog owners have reached this level of connection with their dog, they are much more likely to travel with their dog than those who see their dog as simply a pet (Greenebaum, 2004). Pet ownership is also considered an expression of the self and is linked to an individual's personality (Ellson, 2008). A pet owners' attachment to their pet positively effects the owner's motivation to take their pet to tourism activities.

There are three types of motivated pet owners who travel with their pets: human-pet-relationship-oriented, pet owner-oriented, and pet benefits-oriented (Tang et al., 2022). A traveler and pet owner who is human-pet-relationship-oriented will travel with their dog because they want to improve their level of pet attachment. Owners believe the

trip will benefit their pet, and because they want to compensate their pet for being a loyal companion (Tang et al., 2022). A pet owner-oriented traveler is motivated to travel with their pet because it gives them a sense of novelty and prestige. These owners tend to have a higher income and can spend more when traveling (Tang et al., 2022). A pet benefits-oriented traveler is motivated to travel with their pet because there are perceived benefits for their pet and they want to reciprocate the love and devotion their pet has given them (Tang et al., 2022). Due to pet owner's strong emotional attachment to their pets, tourist locations and activities can advertise the benefits for both human and pet to stimulate the owner's motivation (Hung et al., 2012).

The role of animals in tourism has grown because of changes in the relationship between human and animal and the desires for leisure (Carr, 2009). These days hotels are not only pet friendly but are offering special packages to entice owners to book with them. Pet owners who have a good experience will spread the word to other pet owners and are more willing to come back. Repeat travelers are higher spenders than first time tourists (Lehto et al., 2014). Peng et al. (2014) stated pet owners have a strong influence over each other's intentions to travel as well as their attitudes. A survey done by Kirillova et al. (2015) found half of participants spoke with other pet owners and looked at websites to acquire relevant information on pet travel. Dog owners who travel with their dogs take two to three trips per year. The survey shows 40% of people who travel with dogs are willing to pay an extra \$20 per night for their dog (Dotson et al., 2010). Also, those traveling with pets are more willing to extend their stay compared to when they leave their pet at home (Kirillova et al., 2015). To this end, they are willing to pay more

to travel with their pet than to keep them at a boarding facility to alleviate the guilt and loneliness that comes from boarding their pet (Kirillova et al., 2015). Pet-friendly businesses have the potential to attract visitors who are willing to pay more and stay longer, giving them a boost in the travel industry. Many luxury hotels, such as the Four Seasons and Westin, have become pet friendly to capitalize on this lucrative market.

These hotels provide strict rules and regulations for pets so that all the guests, even the furry ones, can have a good time (Kongtaveesawas & Namwong, 2020). Without these strict regulations, pets can potentially disturb other guests and their pets. This type of experience can adversely affect both pet owner's and non-pet owner's attitudes about the business (Glavocic, 2019). With these new guests come new responsibilities for staff such as being able to handle and clean up after dogs. But due to high demand and limited supply these pet tourism experiences can charge a premium price for their services (Ivanov, 2018). Hotels can also provide benefits for pet owners by giving information regarding nearby pet-friendly attractions, parks, and restaurants; thereby creating a network of pet-friendly businesses for the travelers and creating an experience with fewer constraints (Dilek et al., 2020). Anticipated positive emotions have a much stronger influence on a traveler's decisions compared to anticipated negative emotions. When traveling with a pet, owners that have an anticipated positive emotion of traveling with their dog will have a strong desire to do so (Huang et al., 2021). Therefore, businesses who sell or market a pet and owner experience will create a strong desire in pet owners to travel by associating the business with anticipated positive emotions.

Pet owner's motivations to take their pet places can affect their negotiation ability, which affects their leisure participation with their pet. Negotiation ability is an individual's self-control when it comes to decisions (Hung et al., 2012). An example of this may be camping instead of staying in a hotel to save money on a trip. As more constraints are presented in regard to taking pets to a leisure activity, pet owners are less likely to bring their pets to that leisure activity (Hung et al., 2012). If pet owners are highly motivated to use their negotiation ability, then the pet constraints of a tourist activity can be outweighed. For example, many pet owners prepare a travel kit for their pet with necessities (Peng et al., 2014). They know not to rely on what is available at travel destinations. This shows that pet owners are willing to overcome challenges in order to travel with their pets (Peng et al., 2014).

A common reason that pet owners feel the need to travel with their pets is because they are concerned about poor service at boarding facilities or feel guilty for leaving them behind (Gong et al., 2020). This means traveling with a pet can be cemented in the owner's morals rather than their desires. Yet there are still many constraints pet owners encounter that can make the travel process difficult. For example, it can be more expensive, take longer, or be more work to travel with a pet (Gong et al., 2020). Pet owners may have to pay pet fees, travel via slower transportation -traveling by car instead of by plane- and do a lot of initial preparation to ensure the safety of the pet while traveling. Additionally, there are limited pet friendly accommodations and transportation services. Some destinations may be inappropriate for a pet because of the lack of pet-friendly hotels, restaurants, parks, and taxis (Glavovic, 2019). Pet owners also worry



about their pet's health issues and psychological state while traveling (Gong et al., 2020). Older dogs, or those that have unstable mental health, make it difficult for pet owners to travel with their pets. Another concern to pet owners is the disturbance or endangering of other travelers (Gong et al., 2020). Other travelers could also be afraid of or allergic to dogs. Pet owners may not want to be responsible for ruining another traveler's vacation. Those who are repeatedly encumbered by constraints may develop learned helplessness. This will cause pet owners to abandon their travel intentions altogether (Ying et al., 2021). Nevertheless, pet attachment often outweighs presented constraints and pet owners find a way to travel with their pets (Kirillova et al., 2015).

### **Travelers' Decision-Making Process**

A tourist's attitude towards risk and uncertainty is reflected in their destination choice. Karl (2018) stated tourists with differing attitudes have differing hypothetical destination choices. The hypothetical destination choices are remarkably similar to actual destination choices the tourists make (Karl, 2018). There are three types of travel decision makers: adaptive, rational, and daydreamer. Adaptive decision makers are found to agree to risk and uncertainty more often. Rational decision makers are found to view vacation and nature as incredibly important and pleasurable. Daydreamers associate quality, accessibility to resource, and reputation with low importance (Atadil et al., 2018). Dog owners traveling with their dogs would most likely be either rational or adaptive decision makers. This is because pet owners that travel with their pets have been found to be bigger risk takers, whereas daydreamers are less likely to take on additional risk compared to rational or adaptive decision makers.

The attitude toward each alternative in the decision-making process (awareness set, evoked set) affects the travel destination (Um & Crompton, 1990). Attitude is the difference in the perceived facilitators and perceived inhibitors of each alternative location (Um & Crompton, 1990). Perceived facilitators encourage potential visitors to visit a location because it is what they are looking for, whereas perceived inhibitors are factors that deter potential visitors. Steep travel costs or poor weather are both examples of inhibitors. If there are too many inhibitors, the traveler will not visit. If there are more facilitators than inhibitors, the traveler is more likely to visit that location. In the early evoked set (or the awareness set), the magnitude of the facilitators is most important in predicting the travel destination. In the late evoked set, the magnitude of the inhibitors is more important in predicting the travel destination (Um & Crompton, 1992). Inhibitors are factors such as the dangers around other dogs, while facilitators are factors such as the availability of pet-friendly accommodations. Facilitators can be intrapersonal, interpersonal, and structural. Intrapersonal facilitators are the beliefs, traits, and characteristics of the individual; interpersonal facilitators are groups or individuals that encourage participation; and structural facilitators are external organizations or belief systems of a society that encourage participation in leisure (Raymore, 2002).

### **Trip Behavior**

A strong predictor of trip behavior is past trip behavior (Lehto et al., 2004). Prior experience reduces risk and uncertainty in the traveler's decision-making process (Sönmez & Graefe, 1998). Travelers will often use their past trip behavior to influence their decisions on future travel (Aarts et al., 1998). For example, travelers will revisit

geographic regions because of the confidence they gained from their past experiences (Sönmez & Graefe, 1998). A pet owner may revisit a location because they know it is dog friendly; therefore, there is less risk in visiting. Access to information also affects a traveler's trip behavior. The more reliable information about a destination that is available, and the better the destination image, the more likely a traveler is to visit (Swart et al., 2018). Pet owners believe word-of-mouth from other pet owners to be reliable information (Kirillova et al., 2015). Therefore, receiving positive information about a destination from a fellow pet owner will increase the likelihood of them visiting that destination. The likelihood of traveling is affected by the traveler's attitude, behavior, and whether they are persuaded when they acquire information on a destination (Yoo et al., 2017). The higher the quality of the information is from the traveler's point of view, the more likely they are to be persuaded, and the more likely they are to visit (Yoo et al., 2017). This is because they feel they can make a more well-informed decision. If a traveler receives low quality information, their likelihood to travel decreases because there is more inherent risk from their inability to make a well-informed decision (Yoo et al., 2017).

A common trip type taken by travelers is a pleasure or personal trip (Sung et al., 2001). Individuals who take a pleasure or personal trip spend their own money, and therefore tend to be more price sensitive (Sung et al., 2001). This is different from business trips, where money is less of a concern, but there is less flexibility. There are four market segments associated with pleasure and personal trips: day trippers, recreationalists, travelers visiting family or friends, and those traveling for other purposes

such as an overnight trip (Sung et al., 2001). While there is overlap between these four categories, the Sung et al. (2001) study chose these trip types assuming that each type would be a traveler's main purpose for traveling. Additionally, each of these trip types have different needs. For example, someone who is traveling for the main purpose of recreation must travel somewhere with a recreation space. While this could also be considered a day trip if they do not stay overnight, their main purpose was to recreate instead of travel for a day.

With the Covid-19 pandemic came a change in travel behavior. Travelers are less likely to take public transportation, such as buses, for short trips (Abdullah et al., 2020). Many are also unwilling to travel by air or stay in hotels (Miao et al., 2021). This means that drive-to destinations and domestic trips are more popular because there is a greater perceived safety while traveling via car. Many travelers now tend to lean more heavily towards nature-based destinations in order to maintain a safe distance from others (Miao et al., 2021). Miao et al. (2021) states the practice of traveling to certain destinations during their off-season to avoid crowds may be on the rise. Despite the concerns most travelers have, Miao et al., (2021) predicted there will be a "compensative travel binge" that occurs when regulations are lifted as individuals will want to compensate for their lack of travel during the pandemic.

## **Conclusion**

Hung et al. (2016) found dog owners with a strong pet attachment are more motivated to travel with their dogs to different tourism activities. Beyond this, there is little known about the behavior of pet owners who travel with their dogs on trips.

Facilitators and inhibitors can influence a traveler's decisions, such as whether to travel with their dog, where to stay, and how to travel (Um & Crompton, 1990). Due to the Covid-19 pandemic, traveler's decisions and behavior may have changed. Travelers are less willing to travel using public transportation and are more likely to travel domestically and visit nature-based tourism locations they can drive to (Miao et al., 2021). These changes make it easier for dogs to be brought along on pleasure and personal trips, but little research has been conducted to determine if these changes have actually had a measurable effect.

## CHAPTER THREE

### RESEARCH METHODS

#### **Introduction**

The purpose of this study was to determine a dog owner's likelihood to travel after the Covid-19 pandemic with their dog. It looked at how likelihood was affected by several independent variables: pet attachment, needs satisfaction, social agreement, travelability, and the Covid-19 effect. An online survey was used to look at several different topics, such as whether pet attachment levels can predict the likelihood of traveling with a dog, identifying the facilitators and inhibitors of traveling with a dog, and the pandemics effect on traveling with a dog. BringFido, a pet travel website and app, was used to distribute the survey to pet owners who have traveled in the previous six months at the time of taking the survey in October 2021.

This chapter will first describe the survey instrument in detail. Second, it goes over the independent and dependent variables used in the study. Third, results of pre-testing the instrument are reviewed. Fourth, the sample selection and procedure of the study are explained. Finally, the data analysis process is summarized.

#### **Data Instrument**

An online survey designed on Qualtrics was used to collect data from participants by BringFido. Launched in 2006, BringFido is a free internet-based travel resource for dog owners with information on more than 250,000 hotels, restaurants, and attractions that allow dogs (BringFido, n.d.). It is a social community of dog owners where they can book pet-friendly accommodations and find local activities to enjoy with their dog. While

the app focuses on the United States, it does provide information on locations worldwide. BringFido encourages dog owners to post pictures of their dog enjoying the pet-friendly locations and allows them to leave a review. If a dog owner finds a new pet friendly location, they can submit it to BringFido via the app. BringFido also helps users find pet sitters, doggie daycares, veterinarians, and dog groomers. For a dog owner in an unfamiliar environment, it can bring a sense of comfort to know they can easily find any pet amenity they may need. Furthermore, BringFido provides users with blog posts about current news in the dog travel world. The app provides dog owners information on current trends, whether it be health related, travel related, work related, or food related.

This study used an online structured survey to collect data from participants. A structured survey is one that has fixed questions and wording, set in a certain order by the researcher. This style of survey can provide more accurate data from participants (“Structured vs. Unstructured Questions”, 2019). Covid-19 made it difficult to travel places and talk to dog owners face to face. In addition, an online survey was the best way to reach dog owners across the United States. The survey was sent to pet owners who had booked a hotel through the BringFido app within the last six months. Since they had already used the internet to access BringFido, it appeared that an online survey would work well for the participants. It consisted of 34 questions, with several having multiple statements within the question that required an answer on a Likert-type scale. A copy of this survey instrument can be found in Appendix A.

### *Pet and Travel History*

The first set of questions asked participants about their dogs and their travel history. It begins by asking participants how many dogs they own and whether they own an assistance dog. A greater number of dogs owned by the participant may affect the difficulty of travel. In addition, owning an assistance dog may also affect this decision. Examples of assistance dogs are guide dogs, emotional support dogs, and service dogs. Each offer a different type of aid for their owner and may or may not be necessary for travel. Next, the survey asks whether they have any social media accounts for their dog(s) and allows them to choose any they may use.

The following questions were used to learn of past trip behavior and asked how often they took certain kinds of pleasure and personal trips with their dogs, how often they used certain transportation modes to travel with their dogs, and how often they stayed at various accommodations while traveling with their dogs. However, only the question on how often owners took certain types of trips with their dogs was used for the purposes of this analysis. That question was:

*When you traveled during the Covid-19 pandemic, how often did you to take the following pleasure or personal trips?*

These trip behavior questions were based on the Sung et al. (2001) study which categorized the four pleasure and personal trip types as visiting friends and relatives, recreation trip, day trip, and other. For this study, “other” was changed to “overnight trip” to incorporate a more specific type of trip that dog owners may have taken. The Covid-19



pandemic was included in the questions as a timeframe for their travel behavior. A 4-point Likert-type scale was used to collect information numerically denoted by 1 (Never), 2 (Sometimes), 3 (Often), or 4 (Almost Always). This question was used as a control variable for the study, since past trip behavior has been shown to predict future trip behavior (Lehto et al., 2004).

### *Pet Attachment*

The next section included questions to determine the participant's pet attachment level to their dog(s). The four-question pet attachment scale used by Hung et al. (2016) was used to determine this. It consisted of the following statements:

1. *Owning a dog has helped my health.*
2. *My dog is part of the family.*
3. *I take my dog along when going on trips.*
4. *I like my dog because he/she is loyal to me.*

These pet attachment questions were found to have a reliable Cronbach's alpha by Hung et al. (2016). They also found the composite reliability, convergent validity, and discriminant validity were acceptable. For this survey, a 5-point Likert-type scale was used to collect information that was numerically denoted by 1 (Strongly Disagree), 2 (Somewhat Disagree), 3 (Neither Disagree Nor Agree), 4 (Somewhat Agree), and 5 (Strongly Agree).

### *Facilitators and Inhibitors*

These questions came from Um and Crompton's (1992) study on facilitators and inhibitors. Their study used a 20-question scale to look at the facilitators and inhibitors in the decision-making process related to travel destinations. While Um and Crompton (1992) looked at destinations, this study focused on types of trips. Their 20 questions on facilitators and inhibitors were altered for this study to apply to traveling with dogs. For example, the question:

*A trip to \_\_\_\_\_ would be a lot of fun*

was changed to:

*A trip with my dog would be a lot of fun.*

These questions were separated into the three dimensions during analysis: needs satisfaction, social agreement, and travelability. Needs satisfaction consisted of nine statements, social agreement consisted of six statements, and travelability consisted of five.

Needs Satisfaction statements include:

- *A trip with my dog will be a lot of fun.*
- *Climate is a major factor in my decision to travel with my dog.*
- *I can do a wide variety of things when I travel with my dog.*
- *A trip with my dog is likely to enhance my feelings of well-being.*
- *I can participate in outdoor recreation activities with my dog when I travel.*

- *I consider a trip with my dog challenging.*
- *I am likely to meet many different people with different interests and lifestyles when I travel with my dog.*
- *Traveling with my dog is likely to be a good way for me to relax.*
- *The attractive natural environment is one of the major reasons for traveling with my dog.*

Social Agreement statements include:

- *Others have recommended that I travel with my dog.*
- *I will travel with my dog because a friend or family member wants to .*
- *Others in my travel group with who I usually travel agree with my choice to bring my dog on a trip.*
- *A trip with my dog is likely to improve togetherness with my dog.*
- *I want to travel with my dog because that is what everyone does.*
- *Traveling with my dog is not something everyone would enjoy.*

Travelability statements include:

- *It will cost more money to travel with my dog.*
- *A trip with my dog is possible only at certain times during each year.*
- *Potential health problems in my dog are a concern if I bring them on a trip.*
- *The time I spent traveling with my dog is longer than when I travel without my dog.*
- *It is not absolutely safe for me to travel with my dog.*

An 11-point Likert-type scale was originally used but was determined to be too complicated for survey participants during the pre-test. This survey used a 5-point Likert-type scale to determine whether certain factors were facilitators or inhibitors for traveling with a dog. This scale was numerically denoted as 1 (Strongly Disagree), 2 (Somewhat Disagree), 3 (Neither Disagree nor Agree), 4 (Somewhat Agree), and 5 (Strongly Agree).

### *Future Trip Behavior*

A Covid-19 question marked a change of focus in the survey. This question asked what the participant considers to be the end of the Covid-19 pandemic. This provided a timeframe for the following questions. Then the previous trip behavior questions were repeated in this section and reworded to ask about the likelihood of future trips after the Covid-19 pandemic. For example, question six asked:

*When you traveled with your dog(s) during the Covid-19 pandemic, how often did you to take the following pleasure or personal trips?*

This was changed to the following to measure travel likelihood:

*How likely are you to take the following types of pleasure or personal trips with your dog(s) after the Covid-19 pandemic?*

These questions used a 5-point Likert-type scale from Vagias (2006) that was numerically denoted as 1 (Extremely Unlikely), 2 (Unlikely), 3 (Neutral), 4 (Likely), 5 (Extremely Likely).

### *The Effects of Covid-19*

This section asked participants to rate how strong of an effect the Covid-19 pandemic had on a variety of travel choices. The Covid-19 effect scale was created by the author based on the literature and questions previously asked in the survey. There was a total of seven questions. These questions asked about all aspects of traveling with a dog that may have been affected by the Covid-19 pandemic. A 5-point Likert-type scale from Vagias (2006) was used to answer these questions that was numerically denoted as -2 (Strong Negative Effect), -1 (Negative Effect), 0 (No Effect), 1 (Positive Effect), 2 (Strong Positive Effect). This section consisted of the following questions:

- *The pandemic has had a \_\_\_\_ on how often I take trips with my dog.*
- *The pandemic has had a \_\_\_\_ on the length of my trip with my dog.*
- *The pandemic has had a \_\_\_\_ on where I travel with my dog.*
- *The pandemic has had a \_\_\_\_ on how I travel with my dog.*
- *The pandemic has had a \_\_\_\_ on what accommodations I stay at with my dog.*
- *The pandemic has had a \_\_\_\_ on who I travel with when I take a trip with my dog.*
- *The pandemic has had a \_\_\_\_ on what activities I partake in with my dog.*

### *Demographics*

The demographics section collected a variety of information from the participants including age, gender, marital status, ethnicity, race, level of education, household income, and zip code (see Appendix A). This collected information will be used to

strengthen marketing strategies in the pet tourism industry and correctly target pet travel audiences.

### **Pre-Testing**

For the pilot survey, a link to the survey instrument was then shared on Facebook as well as sent to several Clemson graduate students. A comment box at the end was added for participants to write what difficulties they had while taking the survey. Over two weeks, 32 responses were collected on Qualtrics. Of these 32, only 21 included useful data. The other 11 responses were incomplete. The majority of the participants commented on how the facilitators and inhibitors section was confusing. In response, the Likert-type scale was changed from an 11-point to a 5-point scale to match the other questions. This was because the larger the scale size, the more trouble participants had and were more likely to pick a random answer (“Likert Scale: What It Is & How to Use It”, n.d.). Also, the words “facilitator and inhibitor” were changed to “effect.” On average, the survey took 13 minutes to complete.

### **Sample Selection**

The participants of this study consisted of dog owners that reside in the United States. These participants were individuals that used the BringFido app within the last six months to book a pet-friendly hotel. BringFido is a pet travel service app where dog owners can book dog friendly hotels, find dog-friendly restaurants, and read reviews from other pet parents. It is extremely likely that the participants had traveled with their dog in the last six months since it is evident they had booked a pet-friendly hotel. Therefore, we can estimate this is a population of individuals who have traveled with their dog. This

population consisted of 1,800 BringFido users that were contacted via email. According to BringFido, their demographics are 36% male and 64% female, 80% are college graduates, 90% are United States residents, and the average age is 40 years old (“BringFido – Media Kit 2020”, 2020). Therefore, this study was expected to result in similar demographics.

### **Procedure**

After approval from IRB (see Appendix B) through Clemson University (project: IRB2021-0214), a link to the online survey was sent out via email to BringFido users who had booked a hotel with BringFido within the last six months. The email was sent via BringFido’s Chief Operating Officer asking recipients to fill out the survey instrument and providing a \$10 off coupon for their next hotel booking through the app (see Appendix C1). The first email was sent out on Friday October 8, 2021, to approximately 1,800 recipients. A reminder email was sent out on Friday October 15, 2021 (see Appendix C2). Officials with BringFido then decided after the reminder email on October 15, no other emails should be sent out to avoid annoying their customers. The survey was closed Friday, October 29, 2021, with a total of 340 responses.

### **Data Analysis**

The survey responses were analyzed using IBM SPSS Statistics Version 27. Descriptive statistics and frequencies were run to gather information and look for errors, such as missing data or numbers outside the Likert-type scales. Negative questions in the facilitators and inhibitors section were reverse coded so that they were consistent with the other questions.

From the pet attachment questions a new variable was created called Overall Pet Attachment. The facilitator and inhibitor questions were separated into three new variables: needs satisfaction, social agreement, and travelability based on Um and Crompton’s (1992) study. The Covid Effect questions were separated into two composite variables: Overall Covid Effect and Covid Effect with a Dog.

Reliability analysis was run with the dependent and independent variables (see Table 1). The internal consistency of each variable was interpreted using Statology’s (Zach, 2021) report of the Cronbach’s Alpha. The question “Climate is a major factor in my decision to travel with my dog” from needs satisfaction was removed. This variable then consisted of eight items and had an acceptable Cronbach’s Alpha to 0.785. Travelability consisted of five items and had an unacceptable Cronbach’s Alpha of 0.201. This dimension was removed from the study because of its unreliability. Social agreement was found to have a poor Cronbach’s Alpha but was kept in the study because it still conveyed moderate reliability (Hinton et al., 2014).

**Table 1**  
*Results of the Reliability Analysis*

Variable	Number of items	Cronbach’s Alpha	Internal Consistency
Pet Attachment	4	.69	Questionable
Needs Satisfaction	8	.79	Acceptable
Social Agreement	6	.56	Poor
Travelability	5	.20	Unacceptable
Covid Effect with a Dog	7	.93	Excellent



Multiple regression analyses were then run with the dependent, independent, and control variables to test whether the hypotheses were significant (“Multiple Regression Analysis”, n.d.). There were four models used for analysis, one for each trip type: visiting friends and family, recreation trip, day trip, and overnight trip. Durbin-Watson was used to measure autocorrelation. For each multiple regression analysis, the Durbin-Watson value was less than 0.3 away from 2.0. This means that the four models were found to be normal with almost no autocorrelation detected (Glen, 2021). Only the proven reliable variables were used in the final analysis. The following chapter will review the results from the data analysis of the hypotheses.

## CHAPTER FOUR

### RESULTS

#### **Introduction**

This chapter will discuss the results of the survey that was distributed to BringFido users in October 2021. The first section will review the response rate of the survey; the second section will analyze the demographics of the participants; and the third section will explain the nonresponse test. Finally, the testing of the hypothesis and their results will be presented.

#### **Response rate**

As part of the cooperative nature of this study BringFido officials emailed the online survey link to 1,800 of their customers. The survey received a total of 340 responses at the end of the three-week period. After reviewing the responses, 65 participants had hit “I agree” on the consent page at the beginning of the survey and did not proceed further. These responses were removed. Another 28 responses had not made it to the demographic’s questions; 23 of which stopped at question 19, which was the beginning of the likelihood questions. While it is unclear why they may have stopped the survey at this point, it is possible it was too long for them to complete. These responses were also removed, resulting in 247 completed responses (see Table 2). This meant there was a 13.7% response rate.

**Table 2**  
*Response Rate of Survey*

Date Range	Email Distribution	Responses	Response rate of full test
October 8-14, 2022	Email survey invitation	241	97.5
October 15-21, 2022	Follow up reminder	5	2.0
October 22-29, 2022	No email sent	1	0.5
Total		247	100%

### **Profile of Respondents**

Information regarding age, gender, marital status, race, ethnicity, education level, and household income were collected to better understand the market of those who travel with their dogs. Over two-thirds (69.3%) of the respondents were older than 55 years old, with the largest segment of respondents being 65 or older (see Table 3). Bringfido’s demographics found that the average age for their user is 40 years old (“BringFido – Media Kit 2020”, 2020). This study had respondents who averaged older than 40, with 87.1% identifying as 45 years or older.

**Table 3**  
*Age of Respondents*

Age	Frequency	Valid Percent
18-24	2	0.8
25-34	11	4.5
35-44	17	6.9
45-54	44	17.8
55-64	78	31.6
65 and over	93	37.7
Prefer Not to Answer	2	0.8
Total	247	100.0%

The majority (79.8%) of respondents identified as female while only 19.4% identified as male (see Table 4). These results are similar to BringFido’s demographics, which are 64% female and 36% male (“BringFido – Media Kit 2020”, 2020). With both demographics, there are significantly more females represented.

**Table 4**  
*Gender of Respondents*

Gender	Frequency	Valid Percent
Female	197	79.8
Male	48	19.4
Prefer Not to Answer	2	0.8
Total	247	100.0%

Two-thirds of respondents were married or in a domestic partnership, making this the most popular choice (see Table 5). This was followed by divorced, which accounted for 13.8% of respondents' choice. A total of 9.7% of respondents were single, making this option the third most popular amongst dog owners.

**Table 5**  
*Marital Status of Respondents*

Marital Status	Frequency	Valid Percent
Married, or in a domestic partnership	166	67.2
Divorced	34	13.8
Single (Never married)	24	9.7
Widowed	10	4.0
Separated	3	1.2
Prefer Not to Answer	10	4.0
Total	247	100.0%

Ethnicity and race demographic information was collected using the same wording as the 2020 American Census. Only 2.4% were Spanish or Latino, meaning most respondents did not identify with this ethnicity (see Table 6). In addition, 4.9% of respondents chose the “prefer not to answer” option for this question.

**Table 6**  
*Ethnicity of Respondents*

Hispanic, Latino, or of Spanish origin?	Frequency	Valid Percent
Yes	6	2.4
No	229	92.7
Prefer Not to Answer	12	4.9
Total	247	100.0%

The majority of respondents identified as White, at 87.9%, followed by 2.8% of respondents identifying themselves as Asian (see Table 7). White and Asian marked the most common demographics for this study. From this information it is evident the survey pool lacked diversity as an overwhelming majority of respondents identified themselves as white. These demographics do not correctly represent the population of pet owners in the United States.

**Table 7**  
*Race of Respondents*

Race	Frequency	Valid Percent
White	217	87.9
Asian	7	2.8
American Indian or Alaska Native	2	0.8
Black or African American	2	0.8
Native Hawaiian or Other Pacific Islander	1	0.4
Prefer Not to Answer	18	7.3
Total	247	100.0%

Most respondents had a bachelor’s degree (34.8%). The second most commonly chosen answer was a master’s degree at 27.5% followed by some college at 13.4% (see Table 8). Only 2.4% did not have any experience in higher education. A total of 82.1% of respondents had completed a degree of some type. This was similar to the demographics of Bringfido’s users, to which 80% are college graduates (“BringFido – Media Kit 2020”, 2020).

**Table 8**  
*Respondents' Highest Level of Completed Education*

Education Level	Frequency	Valid Percent
Less than a high school diploma	1	0.4
High school degree or equivalent (e.g., GED)	5	2.0
Some college, no degree	33	13.4
Associates Degree	10	4.0
Bachelor's Degree	86	34.8
Master's Degree	68	27.5
Professional Degree	12	4.9
Doctorate	25	10.1
Technical Degree	2	0.8
Prefer Not to Answer	5	2.0
Total	247	100.0%

The most frequently reported household income amongst respondents was more than \$99,999, with almost half of respondents choosing this option. The next most common response was “prefer not to answer” (see Table 9) with 22.3% of respondent’s choosing this. The remaining 31.9% had household incomes of less than \$99,999.



**Table 9**  
*Annual Household Income of Respondents*

Annual household income	Frequency	Valid Percent
Less than \$20,000	3	1.2
\$20,000-\$34,999	6	2.4
\$35,000- \$49,999	9	3.6
\$50,000-\$74,999	30	12.1
\$75,000-\$99,999	31	12.6
Over \$99,999	113	45.7
Prefer Not to Answer	55	22.3
Total	247	100.0%

Zip codes also were collected to determine the location of respondents. Responses came from a total of 39 different states representing a majority of the country (see Table 10). Generally, more populated areas in the United States had a higher frequency of respondents than less populated areas. There was a total of eight missing responses which were either random letters or numbers that were not associated with an existing zip code, or blank. While participants were required to answer all the questions, the zip code was the final question. Therefore, it seems a few respondents simply exited the survey before answering the final question. Still, there was not enough missing data to affect demographics.

**Table 10***Number of Respondents by State*

State	Frequency	Valid Percent
California	26	10.5
Florida	24	9.7
New York	15	6.1
Washington	14	5.7
Illinois	12	4.9
Arizona	10	4.0
Ohio	9	3.6
South Carolina	9	3.6
Texas	9	3.6
North Carolina	8	3.2
Pennsylvania	8	3.2
Michigan	7	2.8
Minnesota	7	2.8
New Jersey	7	2.8
Virginia	7	2.8
Wisconsin	7	2.8
Massachusetts	6	2.4
Colorado	5	2.0
Connecticut	4	1.6
Indiana	4	1.6

Alabama	3	1.2
Kentucky	3	1.2
Maryland	3	1.2
Nevada	3	1.2
New Hampshire	3	1.2
Oklahoma	3	1.2
Oregon	3	1.2
Utah	3	1.2
Vermont	3	1.2
Georgia	2	0.8
Missouri	2	0.8
New Mexico	2	0.8
Wyoming	2	0.8
Idaho	1	0.4
Louisiana	1	0.4
Maine	1	0.4
Montana	1	0.4
Nebraska	1	0.4
Tennessee	1	0.4
Missing	8	3.2
Total	247	100%

Pet ownership information related to their status as a dog owner was also collected. Originally, there was a question asking how many dogs the respondent owned. This question malfunctioned during the survey and not enough data was collected to be useful. Respondents were also asked if they owned an assistance dog (see Table 11). Owning an assistance dog could make it necessary that they travel with their dog (Rickly et al., 2021). The majority, however, responded no, they do not own an assistance dog, but 11.7% chose yes. This equated to 29 respondents who own assistance dogs. A total of 6.9% of those respondents own an emotional support dog and 4% own a service dog, according to the results of the survey.

**Table 11**  
*Number of Respondents that Own an Assistance Dog*

Assistance Dogs	Frequency	Valid Percent
Yes, an emotional support dog	17	6.9
Yes, a service dog	10	4.0
Yes, a psychiatric dog	2	0.8
No	218	88.3
Total	247	100.0%

Data was also taken to learn whether respondents had a social media account for their dog (see Table 12). The majority said no, but 11.8% said they had an Instagram account. Six participants (2.4%) said they had two social media accounts for their dog. Three had both Facebook and Instagram.

**Table 12***Number of Respondents that have Social Media Accounts for their Dogs*

Social Media Accounts	Frequency	Valid Percent
Yes, Facebook	7	2.8
Yes, Instagram	30	11.8
Yes, Twitter	1	0.4
Yes, other	3	1.2
No	212	83.8
Total	253	100.0%

Descriptive statistics were run on the four independent variables (see Table 13), the control variable (see Table 18), and the dependent variable (see Table 19). Pet attachment had a high mean, showing the high level of pet attachment amongst the respondents. Needs satisfaction had an average that was closer to four, meaning that the respondents on average agreed with needs satisfaction. Respondents, also on average, “neither agreed nor disagreed” with social agreement. The mean of the Covid-19 effect with a dog was between “no effect” and “negative effect” but leaned closer to “no effect.” All four independent variable had a low standard deviation.

**Table 13**  
*Descriptive Statistics of the Independent Variables*

Independent Variables	Minimum	Maximum	Mean	SD
Pet Attachment	1	5	4.7	0.5
Needs Satisfaction	1	5	3.9	0.6
Social Agreement	1	5	3.1	0.5
Covid-19 Effect with a Dog	-2	2	-0.4	0.8

The pet attachment items used a 5-point Likert-type scale ranging from (1) strongly disagree to (5) strongly agree. All four items indicated high levels of pet attachment amongst the respondents, with the majority choosing “strongly agree” (See Table 14). In fact, 96.8% of respondents chose they strongly agree with the statement “my dog is part of the family” (see Appendix D1).

**Table 14**  
*Descriptive Statistics of the Pet Attachment Items*

Pet Attachment Item	Minimum	Maximum	Mean	SD
I take my dog along when going on trips	1	5	4.4	0.8
I like my dog because he/she is loyal to me	-2	2	4.6	0.8
Owning a dog has helped my health	1	5	4.7	0.7
My dog is part of the family	1	5	4.9	0.6

Needs satisfaction consisted of eight items with answers ranging from (1) strongly disagree to (5) strongly agree. There were three items in this dimension that had high means above four (see Table 15). The first item, “a trip with my dog will be a lot of fun,”

resulted in 90.3% of respondents choosing “strongly agree” or “somewhat agree” (see Appendix D2). The next item with a high mean was, “a trip with my dog is likely to enhance my feelings of well-being,” in which 85.8% of respondents chose either “strongly agree” or “somewhat agree” (see Appendix D2). Finally, the item, “I can participate in outdoor recreation activities with my dog when I travel” also had a mean above four and had 88.6% of respondents choose either “strongly agree” or “somewhat agree” (see Appendix D2). The item “I consider a trip with my dog challenging” had the lowest mean and most diverse responses with 36% of respondents choosing either “strongly disagree” or “somewhat disagree,” 26.3% choosing “neither agree nor disagree,” and 36.4% choosing “somewhat agree” (see Appendix D2).

**Table 15**  
*Descriptive Statistics of the Needs Satisfaction Items*

Needs Satisfaction Item	Minimum	Maximum	Mean	SD
I consider a trip with my dog challenging	1	5	2.9	1.0
The attractive natural environment is one of the major reasons for traveling with my dog	1	5	3.5	1.1
I can do a wide variety of things when I travel with my dog	1	5	3.6	1.0
I am likely to meet many different people with different interests and lifestyles when I travel with my dog	1	5	3.9	0.9
Traveling with my dog is likely to be a good way for me to relax	1	5	3.9	0.9
A trip with my dog is likely to enhance my feelings of well being	1	5	4.3	0.8
I can participate in outdoor recreation activities with my dog when I travel	1	5	4.3	0.8
A trip with my dog will be a lot of fun	1	5	4.5	0.8

The social agreement dimension consisted of six items with answer options ranging from (1) strongly disagree to (5) strongly agree. Only one item had a high mean above four (see Table 16). The item, “ a trip with my dog is likely to improve togetherness with my dog,” had 91.5% of respondents choose either “strongly agree” or “somewhat agree” (see Appendix D3). It could be argued this item does not belong in the social agreement dimension because it does not have to do with the opinions of “others” like the other five items do. Yet, the items in this dimension were tested by Um and Crompton (1992) and were found to be reliable. Three of the items had low means indicating that the majority of respondents chose “neither agree nor disagree.”

**Table 16**  
*Descriptive Statistics of the Social Agreement Items*

Social Agreement Item	Minimum	Maximum	Mean	SD
I want to travel with my dog because that is what everyone does	1	5	2.3	0.9
Others have recommended that I travel with my dog	1	5	2.8	1.0
I will travel with my dog because a friend or family member wants to	1	5	2.9	1.2
Others in my travel group with who I usually travel agree with my choice to bring my dog on a trip	1	5	3.8	1.1
Traveling with my dog is not something everyone would enjoy	1	5	3.9	0.8
A trip with my dog is likely to improve togetherness with my dog	1	5	4.5	0.7

The Covid-19 effect dimension consisted of seven items with five options ranging from (-2) strong negative effect to (+2) strong positive effect. For all seven items, the majority of respondents chose either “strong negative effect,” “negative effect,” or “no



effect” (see Table 17). Few respondents chose “strong positive effect” or “positive effect” to describe how Covid-19 affected their travel behaviors.

**Table 17**  
*Descriptive Statistics of the Covid-19 Effect Items*

Covid-19 Effect Item	Minimum	Maximum	Mean	SD
The pandemic has had a ____ on how I travel with my dog	-2	2	-0.3	0.9
The pandemic has had a ____ on who I travel with when I take a trip with my dog	-2	2	-0.3	0.9
The pandemic has had a ____ on what accommodations I stay at with my dog	-2	2	-0.4	0.9
The pandemic has had a ____ on what activities I partake in with my dog	-2	2	-0.4	0.9
The pandemic has had a ____ on how often I take trips with my dog	-2	2	-0.4	1.0
The pandemic has had a ____ on the length of my trip with my dog	-2	2	-0.4	1.0
The pandemic has had a ____ on where I travel with my dog	-2	2	-0.5	1.0

The control variable asked about four trip types and had respondents choose how often they took each one. The options range was (1) never, (2) sometimes, (3) almost always, and (4) always. The means for each trip type was very similar and fell in the middle (see Table 18). The responses for the control variable were evenly spread amongst all four trip frequencies (see Table 18). There was no notable variance amongst the four trip types and the frequency the respondents took each one with their dog during the Covid-19 pandemic. Overnight trip had the highest percentage of respondents choosing “almost always,” at 28.7% (see Appendix D4). It also had to the lowest percentage of

respondents choosing “never,” at 17.8%. This trip type had the largest difference, and it was still only 10.9% (see Appendix D4).

**Table 18**  
*Descriptive Statistics of the Control Variable Items*

Control Variables	Minimum	Maximum	Mean	SD
Past Trip Behavior: Day Trip	1	4	2.3	1.1
Past Trip Behavior: VF&F	1	4	2.4	1.1
Past Trip Behavior: Recreation	1	4	2.4	1.1
Past Trip Behavior: Overnight	1	4	2.6	1.1

*Note.* VF&F: Visiting Friends and Family

The dependent variables’ means were all very similar (see Table 19). On average, the respondents chose between “likely” and “extremely likely” to describe their likelihood of traveling with their dog after the Covid-19 pandemic. The standard deviations were also very low for these variables. The likelihood items had options ranging from (1) extremely unlikely to (5) extremely likely. For all four types of trips the majority chose either “extremely likely” or “likely” (see Table 19). In fact, between 85% and 91.5% of respondents chose those options for the four trip types (see Appendix D5). This shows that some respondents who chose “never” to describe their past trip behavior also feel that it is likely they will travel with their dog in the future.

**Table 19***Descriptive Statistics of the Dependent Variable Items*

Dependent Variables	Minimum	Maximum	Mean	SD
Likelihood: VF&F	1	5	4.3	1.0
Likelihood: Recreation	1	5	4.4	0.9
Likelihood: Overnight	1	5	4.5	0.8
Likelihood: Day Trip	1	5	4.6	0.8

*Note.* VF&F: Visiting Friends and Family

### Nonresponse Test

A nonresponse test was done to determine if there was a significant difference between the first 50 respondents and the last 50 respondents. For this test, five questions were compared:

1. When you traveled with your dog(s) during the Covid-19 pandemic, how often did you to take in the following pleasure or personal trips: Visiting friends and family (4 choices; 1=never, 2=sometimes, 3=often, 4=almost always)
2. Owning a dog has helped my health (5 choices; 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)
3. A trip with my dog will be a lot of fun (5 choices; 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)
4. How likely are you to take the following types of pleasure or personal trips with your dog(s) after the Covid-19 pandemic: Visiting friends and family (5 choices; 1=extremely unlikely, 2=unlikely, 3=neither likely nor unlikely, 4=likely, 5=extremely likely)

5. The Covid-19 pandemic has had (a)\_\_\_\_\_ on how often I take pleasure or personal trips (5 choices: -2=strong negative effect, -1=negative effect, 0=no effect, 1=positive effect, 2=strong positive effect)

By looking at the date and time responses were completed, the first 50 respondents and the last 50 respondents were taken from these six questions and put into new variables. These variables were compared in a paired t-test (see Table 20). This test was two tailed and all models were found insignificant which means there was no significant differences between the first 50 responses and last 50 responses (Miller & Smith, 1983). Therefore, there was no nonresponse bias amongst respondents.

**Table 20**

*Results of Nonresponse Test*

Item	First 50 Respondents		Last 50 Respondents		t-value	p-value
	Mean	SD	Mean	SD		
When you traveled with your dog(s) during the Covid-19 pandemic, how often did you to take in the following pleasure or personal trips: Visiting friends and family	2.3	1.1	2.4	1.1	-0.31	.762
Owning a dog has helped my health	4.9	0.4	4.7	0.7	1.94	.058
A trip with my dog will be a lot of fun	4.5	0.8	4.5	0.8	0.00	1.000
How likely are you to take the following types of pleasure or personal trips with your dog(s) after the Covid-19 pandemic: Visiting friends and family	4.3	1.1	4.5	0.9	-0.96	.340
The Covid-19 pandemic has had (a)_____ on how often I take pleasure or personal trips	-0.9	1.1	-1.1	0.9	0.90	.371

## **Hypothesis testing**

Due to travelability being unreliable, it was removed from the models. This caused the fifth hypothesis to be changed to the fourth hypothesis (See Figure 2). The following hypotheses were tested:

Hypothesis 1: Pet attachment has a significant positive influence on the likelihood of a dog owner to take a pleasure or personal trip with their dog.

1A : Pet attachment has a significant positive influence on the likelihood of a dog owner to travel with their dog when taking a trip to visit friends and family.

1B : Pet attachment has a significant positive influence on the likelihood of a dog owner to travel with their dog when taking a recreational trip.

1C : Pet attachment has a significant positive influence on the likelihood of a dog owner to travel with their dog when taking a day trip.

1D : Pet attachment has a significant positive influence on the likelihood of a dog owner to travel with their dog when taking an overnight trip.

Hypothesis 2 : Needs satisfaction has a significant positive influence on a dog owner's likelihood to travel with their dog.

2A : Needs satisfaction has a significant positive influence on a dog owner's likelihood to travel with their dog when visiting friends and family.

2B : Needs satisfaction has a significant positive influence on a dog owner's likelihood to travel with their dog when taking a recreational trip.

2C : Needs satisfaction has a significant positive influence on a dog owner's likelihood to travel with their dog when taking a day trip.

2D : Needs satisfaction has a significant positive influence on a dog owner's likelihood to travel with their dog when taking an overnight trip.

Hypothesis 3 : Social agreement has a significant positive influence on a dog owner's likelihood to travel with their dog.

3A : Social agreement has a significant positive influence on a dog owner's likelihood to travel with their dog when visiting friends and family.

3B : Social agreement has a significant positive influence on a dog owner's likelihood to travel with their dog when taking a recreational trip.

3C : Social agreement has a significant positive influence on a dog owner's likelihood to travel with their dog when taking a day trip.

3D : Social agreement has a significant positive influence on a dog owner's likelihood to travel with their dog when taking an overnight trip.

Hypothesis 4 : The Covid-19 pandemic has significant positive effect on a dog owners' likelihood to travel with their dog.

4A : The Covid-19 pandemic has a significant positive effect on the likelihood of dog owners traveling with their dog when taking a trip to visit friends and family.

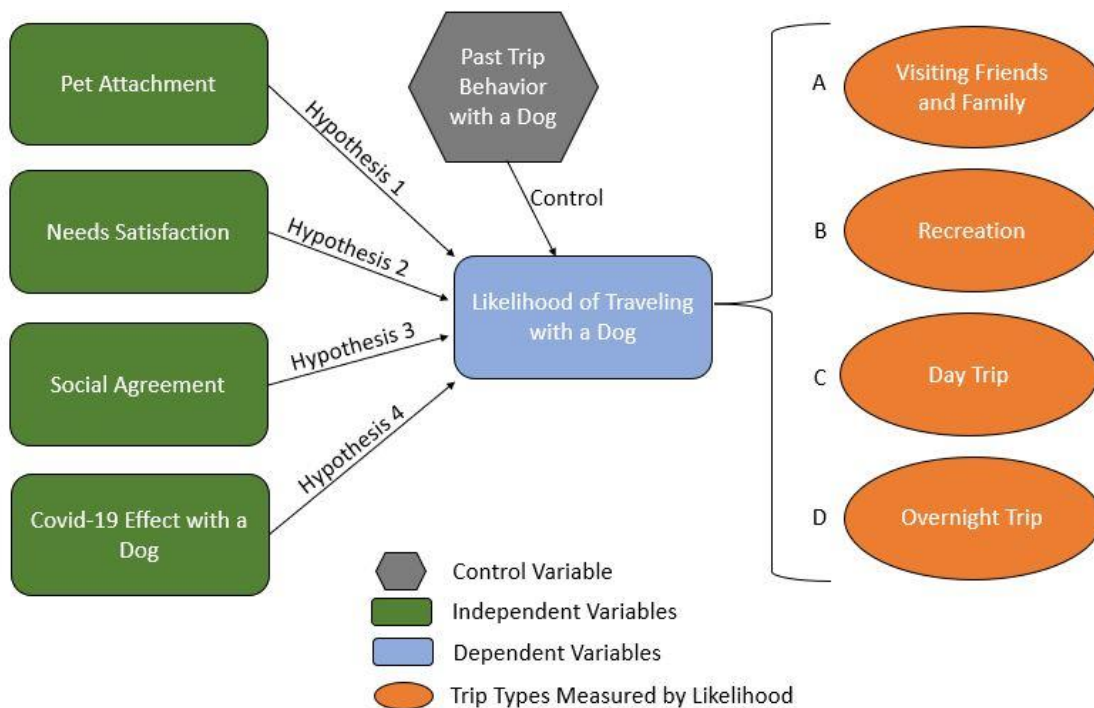
4B : The Covid-19 pandemic has a significant positive effect on the likelihood of dog owners traveling with their dog when taking a recreational trip.

4C : The Covid-19 pandemic has a significant positive effect on the likelihood of dog owners traveling with their dog when taking a day trip.

4D : The Covid-19 pandemic has a significant positive effect on the likelihood of dog owners traveling with their dog when taking an overnight trip.

**Figure 2**

*Final Hypothesis Model*



Multiple linear regressions were run for each trip type to determine whether they were significant (See Table 21). The majority of hypotheses were found to be nonsignificant through the analysis. Needs satisfaction was the only independent variable that was significant with all four trip types.

**Table 21**  
*Results of Multiple Regressions*

Independent Variable	R <sup>2</sup>	F(5, 241)	Beta	t-value	p-value
Model A: VF&F	0.20	11.68			<.001
Pet Attachment			0.14	2.22	.027
Needs Satisfaction			0.19	2.65	.009
Social Agreement			0.05	0.73	.464
Covid-19 Effect with a Dog			-0.14	-2.41	.017
Past Trip Behavior: VF&F			0.30	5.15	<.001
Model B: Recreation Trip	0.20	12.24			<.001
Pet Attachment			0.11	1.71	.089
Needs Satisfaction			0.17	2.35	.020
Social Agreement			0.08	1.20	.230
Covid-19 Effect with a Dog			0.03	0.53	.594
Past Trip Behavior: Recreation			0.26	4.21	<.001
Model C: Day Trip	0.08	4.05			.002
Pet Attachment			0.00	0.06	.949
Needs Satisfaction			0.20	2.60	.010
Social Agreement			-0.01	-0.15	.878
Covid-19 Effect with a Dog			-0.03	-0.40	.689
Past Trip Behavior: Day Trip			0.17	2.61	.010
Model D: Overnight Trip	0.16	9.08			<.001
Pet Attachment			0.10	1.50	.134



Needs Satisfaction	0.27	3.80	<.001
Social Agreement	-0.09	-1.31	.193
Covid-19 Effect with a Dog	-0.00	-0.02	.982
Past Trip Behavior: Overnight Trip	0.21	3.35	.001

*Note.* VF&F: Visiting Friends and Family.

### **Summary**

This study had a 13.7% response rate with 247 completed survey responses. The respondents were mostly white women ranging from 55 to 64 years old. They were mostly married, well educated, and had high household incomes. Some respondents owned an assistance dog, but the majority did not. This survey was completed by pet owners across the United States, with 39 of the 50 states being represented. The respondents had, on average, high pet attachment.

After running statistics using SPSS, no nonresponse bias was found. The travelability variable was removed due to its unreliability, resulting in four hypotheses to test. Most models were found to be not significant, with past trip behavior being used as a control variable. Discussion on the results of the hypothesis testing can be found in chapter five (see Table 22).

## CHAPTER FIVE

### CONCLUSIONS

#### **Introduction**

The purpose of this study was to determine a dog owner's likelihood to travel after the Covid-19 pandemic with their dog. It looked at how pet attachment, Um and Crompton's (1992) facilitators and inhibitors, and Covid-19 effected likelihood. This chapter will discuss the results of this study (see Table 22). Then, it will reveal how this study's information can be used in the industry and contribute to the academic literature. It will also review the limitations this study experienced. Finally, it will explain what future research should look like for this unique and under researched topic.

#### **Discussion**

At the time this survey was distributed to participants by BringFido, Destination Analysts also sent out a survey asking 1,200 American travelers about the current travel sentiment as the Covid-19 Delta Variant abated. Destination Analysts found that from October 13, 2021, to October 15, 2021, American's enthusiasm to travel was increasing rapidly (up 10% in a week) and 57.7% were planning leisure overnight trips in the next few months (Destination Analysts, 2021). Additionally, 82% felt they were ready to start traveling again and travel bookings and travel research increased (Destination Analysts, 2021). Americans had a hopeful outlook on travel and the Covid-19 pandemic as this survey launched.

### *Hypothesis 1*

The first hypothesis looked at the relationship between pet attachment and likelihood of traveling with a dog. Pet attachment was expected to have a positive significant effect on likelihood to take a trip with their dog. This is because the higher the level of pet attachment, the more motivated a dog owner is to travel with their dog (Hung et al., 2016). Hypothesis 1A was found to be positively significant when dog owners visit friends and family. Hypothesis 1B was found to be not significant and was rejected. Therefore, pet attachment did not have a positive influence on the likelihood to take recreational trips with a dog. Hypotheses 1C and 1D were also rejected. Hypothesis 1C was rejected because there was no significant relationship between pet attachment and likelihood to take a day trip with a dog. Hypothesis 1D was rejected because pet attachment had no significant relationship with the likelihood to take an overnight trip with a dog. Of these four sub-hypotheses, there was only a significant positive effect between pet attachment and the likelihood to take a dog to visit friends and family. As a result, Hypothesis 1 was partially supported.

### *Hypothesis 2*

This hypothesis tested the link between needs satisfaction and the likelihood to travel with a dog. A positive significant relationship between needs satisfaction and visiting friends and family was found and Hypothesis 2A was accepted. Hypothesis 2B, 2C, and 2D also all had positive significant relationships, meaning all four sub-hypotheses were accepted. To this end, needs satisfaction had a positive significant influence on the likelihood of traveling with a dog for all four trip types: visiting friends

and family, recreation, day trip, and overnight trip. Hypothesis 2 was fully supported; therefore, needs satisfaction influences a traveler's likelihood of traveling with their dog when taking all four pleasure and personal trip types.

### *Hypothesis 3*

Hypothesis 3 proposed that social agreement would have a positive significant effect on all four trip types. All four sub-hypothesis were rejected in the model. There was no positive significant effect between social agreement and visiting friends and relatives, recreation, day trips, and overnight trips. In fact, the relationship between social agreement and day trips and overnight trips had a negative relationship. Therefore, social agreement did not affect a dog owners' likelihood to travel with their dog after the pandemic and Hypothesis 3 was rejected.

### *Hypothesis 4*

The final hypothesis predicted the Covid-19 effect on the respondent's likelihood to travel with their dog would have a significant positive effect. This is because it would theoretically be easier to travel with their dog. For example, traveling via car instead of a plane. The results of the models show all four of the sub-hypotheses were rejected. This meant there was not a significant positive effect on the relationship between the effect of Covid-19 and the likelihood to travel with a dog for the four trip types. The only positive hypothesis was the one that looked at the likelihood of traveling with a dog for recreation trips. The three remaining trip types all had a negative non-significant effect. In the end, the Covid-19 effect did not affect a pet owners' likelihood to travel after the pandemic and Hypothesis 4 was rejected.

**Table 22**  
*Results of the Hypotheses*

Hypotheses	Hypothesis Status
<i>Hypothesis 1: Pet Attachment</i>	<i>Partially Accept</i>
Hypothesis 1A: VF&F	Accept
Hypothesis 1B: Recreation	Reject
Hypothesis 1C: Day Trip	Reject
Hypothesis 1D: Overnight	Reject
<i>Hypothesis 2: Needs Satisfaction</i>	<i>Accept</i>
Hypothesis 2A: VF&F	Accept
Hypothesis 2B: Recreation	Accept
Hypothesis 2C: Day Trip	Accept
Hypothesis 2D: Overnight	Accept
<i>Hypothesis 3: Social Agreement</i>	<i>Reject</i>
Hypothesis 3A: VF&F	Reject
Hypothesis 3B: Recreation	Reject
Hypothesis 3C: Day Trip	Reject
Hypothesis 3D: Overnight	Reject
<i>Hypothesis 4: Covid-19 Effect with a Dog</i>	<i>Reject</i>
Hypothesis 4A: VF&F	Reject
Hypothesis 4B: Recreation	Reject
Hypothesis 4C: Day Trip	Reject
Hypothesis 4D: Overnight	Reject

*Note.* VF&F: Visiting Friends and Family.

### *Summary*

The majority of the hypotheses in this study were rejected. Still, pet attachment in relation to a dog owners' likelihood to visit friends and family after the pandemic was accepted through the analysis. Therefore, it can be concluded that a traveler's strong pet attachment has a significant positive effect on the likelihood that they will travel with their dog when visiting friends and relatives after the pandemic. This could possibly be because they already see their pet as family, due to the strong pet attachment.

Greenebaum (2004) found that pet owners with a strong pet attachment will often see their pet as their child. This may relate to pet owners feeling that visiting friends and family with their dog is logical considering their dog is also family. Individuals whose pet attachment levels affect their likelihood to visit friends and family may be human-pet relationship-oriented. Tang et al. (2022) found that pet owners who are human-pet relationship-oriented have strong pet attachment levels, and these levels are a reason they travel with their dog. This is comparable to this study's pet attachment levels, which were remarkably high (see Table 14).

Pet attachment did not have a positive significant with the remaining three trip types: day trip, recreation, and overnight trip. This could have been because there are still many constraints when taking these trips that may not exist when traveling to visit friends and family. For example, pet owners do not have to worry about bothering other travelers with their dog when visiting friends and relatives (Chen et al., 2014). This can be stressful if the dog is not well-behaved in public, but still well-loved by its owner. When traveling to visit friends and family, everyone most likely knows the dog already and

have realistic expectations for the dog's behavior. Another example is the need for pet-friendly accommodations when traveling for an overnight trip, which may be difficult to find (Carr & Cohen, 2009). Therefore, they are unable to travel with their pet, not because they do not have strong pet attachment levels, but because it is stressful or simply not possible.

This study also accepted the hypothesis that needs satisfaction influences the likelihood to take all four trip types with a dog. From the analysis we can conclude that needs satisfaction has a significant positive effect on a dog owners' likelihood to travel with their dog after the pandemic. Furthermore, this means that motivations such as novelty, relaxation, and curiosity are influential to a dog owner's likelihood to travel with a dog after the pandemic. Novelty in the sense of needs satisfaction is the desire to see or experience something new and different, whereas relaxation in relation to needs satisfaction is the travelers desire to take the time to pursue their activities of interest (Crompton, 1979). In the case of dog owners, an activity of interest may be hiking with their dog or taking their dog to the beach. Novelty would then encourage them to participate in these activities in a new environment, away from their usual habitat. Therefore, needs satisfaction leads to traveling with a dog. This was shown to relate to all four trip types: visiting friends and family, recreation trip, day trip, and overnight trip.

Due to this variable having such a significant effect, it can be estimated the dog owners in the study were most likely pet owner-oriented (Tang et al., 2022). According to Tang et al. (2022) travelers who are pet owner-oriented are motivated by novelty, personal benefits, and individual enjoyment. Individual enjoyment and personal benefits

are very similar to Crompton's (1979) description of relaxation. In addition, travelers who are pet owner-oriented tend to have a higher household income, similar to the demographics of this study (see Table 9; Tang et al., 2022). Due to the higher income of these travelers, they tend to spend large amounts on their pets when they travel, whether it be products or services (Tang et al., 2022). Therefore, pet owner-oriented travelers are likely to travel with their dog after the pandemic to visit friends and family, take recreation trips, day trips, and overnight trips. Accordingly, various aspects of the tourism and the hospitality industry can benefit from catering to dog owners, including hotels, restaurants, tours, and other businesses.

Social agreement was found not to have a significant positive influence on a traveler's likelihood to travel with their dog after the pandemic. This could be because social media has changed the societal hierarchy. Social media not only connects us to our friends and family, but also to businesses and organizations. Advertisements for tourism destinations and businesses are more available and accessible. Traveler's now read online reviews to help make decisions instead of asking the people they know (Hudson & Thal, 2013). In the case of this study, it was known that the participants used the social media app BringFido to gather travel information. Users can find travel information and reviews of businesses through the BringFido app. Since the original Um and Crompton study that used social agreement was completed in 1990, there have been many changes and advancements in technology including the internet becoming ubiquitous, or universal. While the social agreement questions worked well in the 90s, it is possible they no longer hold up 30 years later.



A surprising result in this study was the removal of the travelability dimension after it was found to be unreliable (see Table 1). Um and Crompton (1990) described travelability as an individual's ability to travel based on time, health, and money. The Covid-19 pandemic changed the norm for the whole world as the pandemic affect the general public's available time, health, and money. Many individuals started to work from home or lost their job due to Covid-19 (Kessel at al., 2021). Those retired or stay-at-home parents found themselves stuck at home. People's daily routines were disrupted, and they had more time on their hands (Kessel et al., 2021). This also caused many individuals mental and physical health to degrade as they were stuck inside (Kessel et al., 2021). People also became more aware of their own health as well as the health of those around them. Many people did not venture out because they were afraid of getting sick or knew they were sick, even if it was not with Covid-19. Before the pandemic, it was generally more acceptable to travel with a cold or fever. During the pandemic, leaving your house with even mild symptoms was considered deviant behavior out of fear of transmitting the virus. Covid-19 caused health to be a crucial consideration rather than an afterthought. Money was also strongly affected by the Covid-19 pandemic. Many individuals lost their jobs and found themselves struggling financially (Kessel et al., 2021). Those that were not struggling were saving their money since it was unclear how long the pandemic would last (Kessel et al., 2021). Those who had put aside money for traveling may have had to use that money to pay bills. Therefore, money's role in travel was not the same as it was before the pandemic. These three factors that made up the

travelability dimension have gone through considerable changes and may be the reason it was found unreliable.

The Covid-19 effect hypothesis was also rejected after analysis. It hypothesized the effect of Covid-19 had a significant positive effect on a dog owner's likelihood to travel with their dog after the pandemic. This was because, theoretically, it may have been easier to travel with a dog due to the pandemic's effects on travel decision and tourism destinations. For example, more travelers were opting to travel by car or RV instead of plane (Miao et al., 2021)(Green, 2020). Taking a dog weighing more than 20 pounds on a plane is almost impossible, whereas traveling with a dog by car is considered to be safer and easier (Bender, 2018). Additionally, more travelers were opting to visit outdoor destinations due to Covid-19, which would make it easier to participate in tourism activities with a dog, such as hiking (Miao et al., 2021). Through analysis, it was found the Covid-19 effect did not have a significant positive influence and the hypothesis was rejected. It is possible the population for this study traveled regularly with their dogs before the pandemic. Since it is known they used BringFido to book a pet-friendly hotel before the survey, they obviously knew about the app and how to use it. There also is the possibility they used the app before the pandemic. This would mean Covid-19 had no effect on their future travel plans because they were the same as their past trip behavior.

### **Implications**

Since there is little academic research regarding dogs as travelers, this study provided valuable information in understanding pet owners who travel with their dogs and their travel behavior. This study looked at the future of pet travel by asking pet

owners their likelihood of traveling, while most pet travel studies are in the present or past. This study will provide information about what influences a traveler's decision to travel with their dog in the future. With the dog travel market being so lucrative, many tourism businesses can also gain insightful knowledge about trends in the pet travel industry that will help them excel in the industry. As the number of canine travelers continues to grow, it is important to understand how this may affect the tourism industry to predict future shifts. With the Covid-19 pandemic having such a strong effect on travel, it is questionable as to whether past studies will still hold up in the post-Covid-19 tourism industry. Therefore, information is needed on the expected travel behavior after the pandemic. This study not only sought to learn travel behavior likelihood post-Covid-19, but that of canine travelers as well. This study provides valuable information that will expand the limited research area of canine travelers and the demand side of animals in tourism.

By catering to a pet owners' needs satisfaction, tourism businesses can attract high paying customers. Specifically, they can advertise unique and new experiences that pet owners can partake in with their pet. Tour companies can offer dog friendly tours, for example a dog friendly ghost tour in Charleston, South Carolina. Hotels can offer experiences that are specific to their business, such as tea time with your dog (Ivanov, 2018). Doing so will attract pet owners taking any of the four trip types.

### **Limitations**

There were several limitations within this study. First, it only surveyed the population that we already know travels with their dog. This study would have been

impartial if we also were able to survey those that use a dog sitting app, such as Rover (rover.com). Second, several questions became unusable after the survey was already sent out, including the question asking how many dogs the participant owned. This was important demographic information that was not incorporated in the final analysis. Third, BringFido officials concluded they would not send a second follow-up email out of fear of annoying customers, leading to a response rate of only 13.7%. If another email had been sent out, it is possible there would have been a higher response rate. Fourth, the trip types used in this study overlapped in their definitions. Someone who took a day trip could have also classified it as a recreation trip. This means that the answers provided by respondents were less precise.

This survey data was also collected when the Covid-19 Delta strain was nearing the end of its course. At the time, there was hope that the pandemic was nearing an end (Destination Analysts, 2021). Therefore, the participants took the study with an end in sight. A few months later the Omicron strain surged through the United States, once again throwing everyone back into the pandemic, effecting travel and all aspects of the hospitality industry. It is unknown how this may have affected the participants after this study.

### **Recommendations for Further Research**

Dogs as travelers is a niche tourism market that many businesses have only begun to understand. Further research is needed to determine what motivates and constraints dog owners from traveling with their dog. It also needs to be determined whether constraints of traveling with a dog deter the dog owner from traveling all together. Or

whether they are simply more likely to travel if they can take their dog. For example, whether women feel safer when traveling with a dog, and if that affects their decision to travel.

Surveying pet owners who use a pet sitting app, such as Rover (rover.com), would likely provide different answers, even though it would still be dog owners. A qualitative study using interviews would provide valuable information on pet owners travel habits with their dog. We could determine how they differentiate from those that travel without dogs. It would also be beneficial to learn where pet owners gather information on where to travel with their pets. For example, determining whether their decision is influenced more by social media, news articles, or the opinions of friends and family.

Research done on the health effects to a pet owner from traveling with a dog, both mentally and physically, could result in an interesting outcome. With that being said, there are some individuals who are unable to travel without a dog because of their health. Such is the case with service animals, for example a medical alert dog. There is extremely little research done on travelers with assistance dogs. Further research is needed to learn whether these individuals are limited to how they travel and where they visit as well as to understand their overall experience. It would also be interesting to conduct studies in which the dogs that travel are the participants instead of the owners. Through this information, researchers could better understand whether dogs traveling with their owners receive health benefits.

A study that correctly represents the demographics of pet owners is also needed. This study had narrow demographics that did not correctly reflect the pet owner population in the United States. While this study focused on the United States, there are pet owners who travel all over the world with their pets. This study applied to worldwide pet owners would possibly provide different results. Each country has its own regulations on pet travel, which may make it easier or harder to travel with a pet. It would be helpful to learn whether tourist destinations that market themselves as pet friendly, such as Bend, Oregon, have higher tourism numbers because of it.

Traveling with cats is also on the demand side of tourism, though it is less common than traveling with dogs. There are many influencers on social media that share their experiences of traveling with their cat. While this is not often done, in the future this could be a more prominent industry and a lucrative field of study, especially with the considerable number of households that contain cats and a diversity of service animal species. There is extremely little, if any, research done on travelers who travel regularly with cats.

It would be helpful to have a study that creates new social agreement and travelability dimensions for the traveler's decision-making process. Since there have been so many changes in the last 30 years, the questions are outdated. Additionally, creating pet specific facilitators and inhibitors from those dimensions would be useful and more relevant for pet travelers.

## APPENDICES

Appendix A

Survey Instrument

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**Start of Block: Pet and Travel History**

Q1 How many dog(s) do you currently own?

0 1 2 3 4 5 5 6 7 8 9 10

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Number of dogs you own



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Q2 Do you own an assistance dog?

- Yes, a service dog
  - Yes, a psychiatric dog
  - Yes, a guide dog or hearing dog
  - Yes, an emotional support dog
  - No
-



Q3 Do you have a social media account for your dog(s)? Please check all that apply

- Yes, Facebook
- Yes, Instagram
- Yes, Twitter
- Yes, other
- No

Q4 How many pleasure or personal trips have you taken during the Covid-19 pandemic?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



Q5 How many pleasure or personal trips did you take **with your dog(s)** during the Covid-19 pandemic?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



Q For the following questions please answer by choosing **Never**, **Sometimes**, **Often**, and **Almost Always**, with **Sometimes** meaning *every once in a while* and **Often** meaning *frequently*.

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Q6 When you traveled during the Covid-19 pandemic, how often did you to take the following pleasure or personal trips?

	Never	Sometimes	Often	Almost Always
Visiting friends or relatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recreation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Day trip	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overnight trip	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Q7 When you traveled **with your dog(s)** during the Covid-19 pandemic, how often did you take in the following pleasure or personal trips?

	Never	Sometimes	Often	Almost Always
Visiting friends or relatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recreation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Day trip	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overnight trip	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q8 When you took pleasure or personal trips during the Covid-19 pandemic, how often did you use these means of transportation to reach your destination?

	Never	Sometimes	Often	Almost Always
Your own vehicle or a friend or family members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rental Car/Rideshare	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Train	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Airplane	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9 When you took pleasure or personal trips **with your dog(s)** during the Covid-19 pandemic, how often did you use these means of transportation to reach your destination?

	Never	Sometimes	Often	Almost Always
Your own vehicle or a friend or family members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rental Car/Rideshare	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Train	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Airplane	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10 When you took pleasure or personal trips during the Covid-19 pandemic, how often did you use these accommodations at your destination?

	Never	Sometimes	Often	Almost Always
Hotel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A friend or family members place	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
AirBnB or other vacation rental	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personal Vacation home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RV/Campground	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q11 When you took pleasure or personal trips **with your dog(s)** during the Covid-19 pandemic, how often did you use these accommodations at your destination?

	Never	Sometimes	Often	Almost Always
Hotel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A friend or family members place	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
AirBnB or other vacation rental	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personal Vacation home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RV/Campground	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q12 How many times during the Covid-19 pandemic have you used a pet sitting service such as Rover?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Click to write Choice 1	
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Q13 How many times during the Covid-19 pandemic have you used a pet travel service such as BringFido?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Click to write Choice 1	
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Q14 Please describe times when you do **not** take your dog(s) on a pleasure or personal trip during the Covid-19 pandemic

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End of Block: Pet and Travel History

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Start of Block: Pet Attachment

Q15 Pet Attachment

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
Owning a dog has helped my health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My dog is part of the family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I take my dog along when going on trips	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like my dog because he/she is loyal to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Pet Attachment

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**Start of Block: Inhibitors and Facilitators**

Q16 Please rate how strongly you agree or disagree with the following statements when it comes to traveling with your dog:

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
A trip with my dog will be a lot of fun	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It will cost more money to travel with my dog	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A trip with my dog is possible only at certain times during each year	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Others have recommended that I travel with my dog	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Climate is a major factor in my decision to travel with my dog	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can do a wide variety of things with my dog when I travel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A trip with my dog is likely to enhance my feeling of well-being	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can participate in outdoor recreation activities with my dog when I travel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



I will travel with my dog because a friend or family member wants to

Others in my travel group with whom I usually travel agree with my choice to bring my dog on a trip

A trip with my dog is likely to improve togetherness with my dog

I want to travel with my dog because that is what everyone does

I consider to a trip with my dog challenging

Potential health problems in my dog are a concern if I bring them on a trip

I am likely to meet many different people with different interests and lifestyles

when I travel  
with my dog

Traveling with  
my dog is  
likely to be a  
good way for  
me to relax

The time  
spent  
traveling with  
my dog is  
longer than  
when I travel  
without my  
dog

It is not  
absolutely  
safe for me to  
travel with my  
dog

The attractive  
natural  
environment  
is one of the  
major reasons  
for traveling  
with my dog

Traveling with  
a dog is not  
something  
everyone  
would enjoy

End of Block: Inhibitors and Facilitators

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Start of Block: Covid-19 End

Q17 What do you consider to be the end of the Covid-19 pandemic?

- When I am fully vaccinated
  - When the majority of the population is fully vaccinated
  - When everyone is fully vaccinated
  - Other
- 

Q18 If you answered other, what do you consider the end of the Covid-19 pandemic?

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End of Block: Covid-19 End

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Start of Block: Future Trips

Q19 How likely are you to take the following types of pleasure or personal trips after the Covid-19 pandemic?

	Extremely Unlikely	Unlikely	Neutral	Likely	Extremely Likely
Visiting friends or relatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recreation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Day Trip	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overnight trip	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Q20 How likely are you to take the following types of pleasure or personal trips **with your dog(s)** after the Covid-19 pandemic?

	Extremely Unlikely	Unlikely	Neutral	Likely	Extremely Likely
Visiting friends or relatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recreation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Day Trip	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overnight trip	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q21 How likely are you to use these means of transportation to reach your destination for pleasure or personal trips after the Covid-19 pandemic?

	Extremely Unlikely	Unlikely	Neutral	Likely	Extremely Likely
Your own vehicle or a friend or family members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rental Car/Rideshare	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Train	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Airplane	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Q22 How likely are you to use these means of transportation to reach your destination for pleasure or personal trips with your dog(s) after the Covid-19 pandemic?

	Extremely Unlikely	Unlikely	Neutral	Likely	Extremely Likely
Your own vehicle or a friend or family members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rental Car/Rideshare	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Train	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Airplane	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Q23 How likely are you to use these accommodations at your destination for pleasure or personal trips after the Covid-19 pandemic?

	Extremely Unlikely	Unlikely	Neutral	Likely	Extremely Likely
Hotel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A friend or family members place	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
AirBnB or other vacation rental	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personal Vacation home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RV/Campground	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q24 How likely are you to use these accommodations at your destination for pleasure or personal trips **with your dog(s)** after the Covid-19 pandemic?

	Extremely Unlikely	Unlikely	Neutral	Likely	Extremely Likely
Hotel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A friend or family members place	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
AirBnB or other vacation rental	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personal Vacation home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RV/Campground	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Q25 Please describe times when you will **not** take your dog(s) on a pleasure or personal trip after the Covid-19 pandemic

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End of Block: Future Trips

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Start of Block: Covid-19 Effect

Q26 Please rate how strong of a positive or negative effect the Covid-19 pandemic has had on you for the following questions. An example of a positive effect is traveling more often while an example of a negative effect would be traveling less often.

	Strong Negative Effect	Negative Effect	No Effect	Positive Effect	Strong Positive Effect
The Covid-19 pandemic has had (a)_____ on <i>how often</i> I take pleasure or personal trips	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Covid-19 pandemic has had (a)_____ on the <i>length</i> of my trip when I take a pleasure or personal trip	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Covid-19 pandemic has had (a)_____ on <i>where</i> I travel when I take a pleasure or personal trip	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Covid-19 pandemic has had (a)_____ on <i>how</i> I travel when I take a personal or pleasure trip (ex: car, plane)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Covid-19 pandemic has had (a)_____ on what <i>accommodations</i> I stay at when I take a pleasure or personal trip	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



(ex: hotel, RV)

The Covid-19 pandemic has had

(a) \_\_\_\_\_ on *who* I travel with when I take a personal or pleasure trip

The Covid-19 pandemic has had

(a) \_\_\_\_\_ on what *activities* I partake in when I take a pleasure or personal trip (ex: hiking, tours)

The Covid-19 pandemic has had

(a) \_\_\_\_\_ on *how often* I take pleasure or personal trips **with my dog**

The Covid-19 pandemic has had

(a) \_\_\_\_\_ on the *length* of my trip **with my dog** when I take a pleasure or personal trip

The Covid-19 pandemic has had

(a) \_\_\_\_\_ on *where* I travel **with my dog** when I take a pleasure or

personal trip

The Covid-19 pandemic has had

(a)\_\_\_\_\_ on *how* I travel **with my dog** when I take a personal or pleasure trip (ex: car, plane)

The Covid-19 pandemic has had

(a)\_\_\_\_\_ on what *accommodations* I stay at **with my dog** when I take a pleasure or personal trip (ex: hotel, RV)

The Covid-19 pandemic has had

(a)\_\_\_\_\_ on *who* I travel with when I take a personal or pleasure trip **with my dog**

The Covid-19 pandemic has had

(a)\_\_\_\_\_ on what *activities* I partake in **with my dog** when I take a pleasure or personal trip (ex: hiking, tours)

The Covid-19 pandemic has had (a)\_\_\_\_\_

on my level of  
attachment to  
my dog

End of Block: Covid-19 Effect

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Start of Block: Demographics

Q27 What is your age?

- Under 18
  - 18-24
  - 25-34
  - 35-44
  - 45-54
  - 55-64
  - 65 and over
  - Prefer Not to Answer
-

Q28 To which gender do you most identify?

- Female
  - Male
  - Other
  - Prefer Not to Answer
- 

Q29 What is your marital status?

- Single (Never married)
  - Married, or in a domestic partnership
  - Widowed
  - Divorced
  - Separated
  - Prefer Not to Answer
- 

Q30 Are you of Hispanic, Latino, or of Spanish origin?

- Yes
- No
- Prefer Not to Answer

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Q31 How would you describe yourself?

- American Indian or Alaska Native
  - Asian
  - Black or African American
  - Native Hawaiian or Other Pacific Islander
  - White
  - Prefer Not to Answer
-

Q32 What is the highest level of education that you have completed?

- Less than a high school diploma
- High school degree or equivalent (e.g., GED)
- Some college, no degree
- Associates Degree
- Bachelor's Degree
- Master's Degree
- Professional Degree
- Doctorate
- Technical Degree
- Prefer Not to Answer

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Q33 What is your zip code?

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Q34 What is your annual household income?

- Less than \$20,000
- \$20,000-\$34,999
- \$35,000- \$49,999
- \$50,000-\$74,999
- \$75,000-\$99,999
- Over \$99,999
- Prefer Not to Answer

End of Block: Demographics

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## Appendix B

### IRB Approval Letter



To: William C Norman  
Re: Clemson IRB Number: IRB2021-0214  
Exempt Category: D2  
Determination Date: 05-Oct-2021  
Funding Sponsor: N/A  
Project Title: COVID-19 AND CANINE TRAVELERS: DETERMINING LIKELIHOOD TO TRAVEL WITH DOGS DURING AND AFTER THE COVID-19 PANDEMIC

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The Office of Research Compliance determined that the proposed activities involving human participants meet the criteria for exempt review under 45 CFR 46.104(d).

**Principal Investigator (PI) Responsibilities:** The PI assumes the responsibilities for the protection of human subjects as outlined in the [Principal Investigator's Responsibilities](#) guidance.

**Non-Clemson Affiliated Collaborators:** This determination only covers Clemson affiliated researchers on the study. External collaborators will have to consult with their respective institution's IRB office to determine what is required for their role on the project.

**Progress Report:** A progress report is not required. Exempt determinations do not have to be renewed or extended.

**Modifications:** In general, investigators are not required to submit changes to the Clemson University's IRB office once a research study is designated as exempt as long as those changes do not affect the exempt category or criteria for exempt determination (changing from exempt status to expedited or full review, changing exempt category) or that may substantially change the focus of the research study such as a change in hypothesis or study design.

If you plan to make changes to your study, please submit an amendment request to the IRB office. All changes must be reviewed and approved prior to implementation.

**New Funding:** Notify the IRB office if new funding is received for an active study. IRB review of the new award must be completed before new funds can be spent on human research activities, as the new funding source may have additional or different requirements.

**Reportable Events:** Notify the IRB office immediately if there are any unanticipated problems involving risk to participants, complications, adverse events and/or any complaints from research participants by submitting the reportable event form within InfoEd.

**Study Personnel Changes:** Notify the IRB office if the PI of the study changes. The PI is not required to notify the IRB office of other study personnel changes for exempt determinations. The PI is responsible for maintaining records of personnel changes and appropriate training.

**CITI Training:** All study personnel are required to complete the [CITI human subjects training course](#).

**Non-Clemson Affiliated Sites:** A site letter is required for off-campus sites. Refer to the [guidance on research site/permission letters](#) for more information. An amendment is required to add additional sites to the study.

**International Research:** Clemson's approval is based on U.S. human subjects protections regulations and [Clemson University human subjects protection policies](#). Researchers should become familiar with all pertinent information about local human subjects protection regulations and requirements when conducting research in countries other than the United States. We encourage you to discuss with your local contacts any possible human subjects research requirements that are specific to your research site, to comply with those requirements and to inform Clemson's IRB office of those requirements so we can better help other researchers prepare for [international research](#) in the future.

**New IRB Application:** A new application is required if the study remains open for more than 5 years after the initial determination.

**Closure:** Notify the IRB office when the study can be closed or if the PI leaves the university. Closure indicates that research activities with human subjects are no longer ongoing, have stopped and are complete. Human research activities are complete when investigators are no longer obtaining information or biospecimens about a living person through interaction or intervention with the individual, obtaining identifiable private information or identifiable biospecimens about a living person, and/or using, studying, analyzing, or generating identifiable private information or identifiable biospecimens about a living person.

**Contact Information:** Please contact the IRB office at [IRB@clemson.edu](mailto:IRB@clemson.edu) or visit our [webpage](#) if you have questions.

Clemson University's IRB is committed to facilitating ethical research and protecting the rights of human subjects. All research involving human participants must maintain an ethically appropriate standard, which serves to protect the rights and welfare of the participants. This involves obtaining informed consent and maintaining confidentiality of data.

Institutional Review Board  
Office of Research Compliance  
Clemson University  
<https://www.clemson.edu/research/compliance/irb/>

IRB Number: IRB0000481  
FWA Number: FWA00004497



## Appendix C

### BringFido Emails

#### *Appendix C1: BringFido Participant Recruitment Letter*

Email Subject: Pet Travel - We want to hear from you!

Email Body:

Thanks for being a valued member of the BringFido community. We have a quick favor to ask. Angela Rowan is a student at Clemson University, pursuing her masters degree in travel and tourism. As part of her thesis, she is conducting a survey of pet owners. We'd be grateful for your participation. The survey takes just a few minutes to complete and will support research efforts in the area of pet travel.

[Survey Link]

As an extra thanks for participating, we invite you to use gift code "SURVEY" to save \$10 on your next pet-friendly hotel booking on BringFido.com.

Happy Travels,

Jason

#### *Appendix C2: BringFido Follow Up Letter*

Email Subject: Pet Travel Survey - We love your input!

Email Body:

Thank you for your completion of Angela Rowan's pet travel survey. If you have not yet completed the survey, we would greatly appreciate it if you took a few minutes to do so. Angela Rowan is a student at Clemson University, pursuing her masters degree in travel and tourism. As part of her thesis, she is conducting a survey of pet owners. We'd be grateful for your participation. The survey takes just a few minutes to complete and will support research efforts in the area of pet travel.

[https://clemson.ca1.qualtrics.com/jfe/form/SV\\_7396EXPFsWTT1gW](https://clemson.ca1.qualtrics.com/jfe/form/SV_7396EXPFsWTT1gW)

As an extra thanks for participating, we invite you to use gift code "SURVEY" to save \$10 on your next pet-friendly hotel booking on BringFido.com.

Appendix D

Frequency Tables

*Appendix D1: Pet Attachment Item Frequency Table*

**Pet Attachment - My dog is part of the family**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	6	2.4	2.4	2.4
	Somewhat agree	2	.8	.8	3.2
	Strongly agree	239	96.8	96.8	100.0
	Total	247	100.0	100.0	

*Appendix D2: Needs Satisfaction Frequency Tables*

**Q16\_1\_Recoded**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	4	1.6	1.6	1.6
	2.00	3	1.2	1.2	2.8
	3.00	17	6.9	6.9	9.7
	4.00	73	29.6	29.6	39.3
	5.00	150	60.7	60.7	100.0
	Total	247	100.0	100.0	

### Q16\_7\_Recoded

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	.8	.8	.8
	2.00	7	2.8	2.8	3.6
	3.00	26	10.5	10.5	14.2
	4.00	85	34.4	34.4	48.6
	5.00	127	51.4	51.4	100.0
	Total		247	100.0	100.0

### Q16\_8\_Recoded

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	.4	.4	.4
	2.00	8	3.2	3.2	3.6
	3.00	19	7.7	7.7	11.3
	4.00	107	43.3	43.3	54.7
	5.00	112	45.3	45.3	100.0
	Total		247	100.0	100.0

### Q16\_13\_Recoded

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	26	10.5	10.5	10.5
	2.00	63	25.5	25.5	36.0
	3.00	65	26.3	26.3	62.3
	4.00	90	36.4	36.4	98.8
	5.00	3	1.2	1.2	100.0
	Total		247	100.0	100.0

Appendix D3: Social Agreement Item Frequency Table

Q16_11_Recoded					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	3	1.2	1.2	1.2
	3.00	18	7.3	7.3	8.5
	4.00	78	31.6	31.6	40.1
	5.00	148	59.9	59.9	100.0
	Total	247	100.0	100.0	

Appendix D4: Control Variable Frequency Tables

**When you traveled with your dog(s) during the Covid-19 pandemic, how often did you to take in the following pleasure or personal trips? - Visiting friends or relatives**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	64	25.9	25.9	25.9
	Sometimes	93	37.7	37.7	63.6
	Often	29	11.7	11.7	75.3
	Almost Always	61	24.7	24.7	100.0
	Total	247	100.0	100.0	

**When you traveled with your dog(s) during the Covid-19 pandemic, how often did you to take in the following pleasure or personal trips? - Recreation**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	62	25.1	25.1	25.1
	Sometimes	77	31.2	31.2	56.3
	Often	46	18.6	18.6	74.9
	Almost Always	62	25.1	25.1	100.0
	Total	247	100.0	100.0	

**When you traveled with your dog(s) during the Covid-19 pandemic, how often did you to take in the following pleasure or personal trips? - Day trip**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	66	26.7	26.7	26.7
	Sometimes	83	33.6	33.6	60.3
	Often	52	21.1	21.1	81.4
	Almost Always	46	18.6	18.6	100.0
	Total	247	100.0	100.0	

**When you traveled with your dog(s) during the Covid-19 pandemic, how often did you to take in the following pleasure or personal trips? - Overnight trip**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	44	17.8	17.8	17.8
	Sometimes	91	36.8	36.8	54.7
	Often	41	16.6	16.6	71.3
	Almost Always	71	28.7	28.7	100.0
	Total	247	100.0	100.0	

*Appendix D5: Dependent Variable Frequency Tables*

**How likely are you to take the following types of pleasure or personal trips with your dog(s) after the Covid-19 pandemic? - Visiting friends or relatives**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Unlikely	7	2.8	2.8	2.8
	Unlikely	11	4.5	4.5	7.3
	Neutral	19	7.7	7.7	15.0
	Likely	68	27.5	27.5	42.5
	Extremely Likely	142	57.5	57.5	100.0
	Total	247	100.0	100.0	

**How likely are you to take the following types of pleasure or personal trips with your dog(s) after the Covid-19 pandemic? - Recreation**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Unlikely	4	1.6	1.6	1.6
	Unlikely	7	2.8	2.8	4.5
	Neutral	19	7.7	7.7	12.1
	Likely	69	27.9	27.9	40.1
	Extremely Likely	148	59.9	59.9	100.0
	Total	247	100.0	100.0	

**How likely are you to take the following types of pleasure or personal trips with your dog(s) after the Covid-19 pandemic? - Day Trip**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Unlikely	3	1.2	1.2	1.2
	Unlikely	5	2.0	2.0	3.2
	Neutral	13	5.3	5.3	8.5
	Likely	58	23.5	23.5	32.0
	Extremely Likely	168	68.0	68.0	100.0
	Total	247	100.0	100.0	

**How likely are you to take the following types of pleasure or personal trips with your dog(s) after the Covid-19 pandemic? - Overnight trip**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Unlikely	4	1.6	1.6	1.6
	Unlikely	3	1.2	1.2	2.8
	Neutral	17	6.9	6.9	9.7
	Likely	72	29.1	29.1	38.9
	Extremely Likely	151	61.1	61.1	100.0
	Total	247	100.0	100.0	

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