

**Communication in Veterinary Medicine: An Examination  
of the Veterinary Medical Encounter**

by

Kathryn A. Hall

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Approved by

Debra Worthington, Chair, Associate Professor, Department of Communication and Journalism  
Margaret Fitch-Hauser, Associate Professor, Department of Communication and Journalism  
Susan Waters, Assistant Professor, Department of Communication and Journalism

## Abstract

The purpose of this study was to investigate client perceptions of communication behaviors employed by veterinarians during the veterinary medical interview. Fifty small animal veterinary clients participated, identifying communication behaviors used during the medical encounter and rating their level of satisfaction with various aspects of the medical interview. Results showed various communication behaviors used during the encounter as well as various behaviors that clients prefer their veterinarian to employ. Stepwise regression was used to show that clients are most satisfied when they have their veterinarians undivided attention as well as when they are provided with practical information about their pet's health. Drawing from uncertainty reduction theory, results show that the employment of effective communication behaviors by both veterinarian and client could result in improved veterinary medical encounters.

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## **Introduction**

Much like human medicine, veterinary medicine is a field that requires the most updated information and scientific technology for success in treating patients. However, it is also an art in which communication and effective listening are vital components necessary for effective care (Osborne & Ulrich, 2008). Veterinarians treat a variety of animals, ranging from dogs and horses to cattle and iguanas. However, with every animal that practitioners treat, they must also communicate with the animal's owner and caregiver.

Pets are increasingly being considered a part of the American family (Cohen, 2002; Hafen, Rush, Reisbig, McDaniel, & White, 2010; Shaw et al., 2004a). A recent study reported that 87% of pet owners refer to their pets as family members, while 95% consider their pets to be friends (Planchon, Templer, Stokes, & Keller, 2002). Other research found that 81% of pet owners who consider themselves highly committed to their pets were more likely to adhere to medical recommendations for their pet than for a human outside their family (Cohen, 2002). This commitment is also reflected in how much they are willing to spend on pet care. Americans spend over \$45 billion annually on their pets, with nearly a quarter of that being dedicated to veterinary medical costs (Haight, 2009). People are willing to devote substantial financial resources to their care of their pets, which is why small animal private practice is the fastest growing sector of veterinary medicine and is predicted to increase by 32% from 2000 to 2015 (Brown & Silverman, 1999). As client expectations rise, veterinarians are facing increased pressure to understand and enrich the client-veterinarian relationship. This is especially important for the growing awareness that the major cause of client dissatisfaction is inadequate communication (Shaw, Adams, Bonnett, Larson, & Roter, 2008).

A recent study by the KPMG, a professional financial advisory company, identified a lack of the communication and management skills as a critical issue for veterinary practice (Frankel, 2006). In the same study, the KPMG also asked pet owners what factors were most important in choosing a veterinarian. Survey participants identified listening and providing useful information among the top factors affecting veterinary choice. These factors emphasize the importance of interpersonal skills and listening between practitioner and client.

Unfortunately, few vet schools offer interpersonal communication training (Adams & Kurtz, 2006; Brandt & Bateman, 2006; Magrath, 2006). Kurtz (2006), in a study of veterinary school curriculum, reports that communication skills training in medical and veterinary education have been seriously neglected. While the number of veterinary schools who offer communication courses in speaking and writing has increased in recent years, very few focus on areas of communication (e.g., nonverbal, interpersonal, relational) that would be helpful in dealing with clients and their pets (Shaw et al., 2004b).

Veterinary practitioners have begun to recognize this problem (Russell, 1994). Kogan and her colleagues (2004), in a recent study, report that 89% of recent veterinary school graduates surveyed consider training in the emotional support of clients important. Recent graduates were also asked to compare the communication skills (e.g., effective listening, interpersonal skills) they learned in client relations classes to those skills acquired in traditional science classes. Results revealed that 42% felt communication skills were more important, 43% felt they were equally as important, and 15% felt that the skills learned were less important. Only 35% of graduates surveyed felt that they had received adequate training in communication and emotional support. Kogan et al. (2004) concluded, “New graduates are well prepared with technical skills, but frequently are deficient in communication and interpersonal skills” (p.507).

## **Rationale**

This study explores several areas of health communication (e.g. patient satisfaction, patient-centered care, and relationship-centered care) in relation to the effectiveness of communication skills used during the veterinary medical interview. As veterinary scholars become increasingly aware of the need for strong communication skills in veterinary medicine, they are also becoming more aware of the limited information and research on the effects that communication has on the veterinary-client relationship. (Bonvicini & Keller, 2006; Frankel, 2006; Shaw, Adams & Bonnett, 2004). Very little empirical communication research has been conducted in veterinary medicine. Most of the information on communication in veterinary medicine is found in professional journals or magazines and is usually written by veterinarians for veterinarians (Shaw et al., 2004a; Strand, 2006). In other words, current research does not give much consideration to what clients think about their veterinarian's communication practice and how it impacts the veterinarian-client relationship.

As a result, veterinarians are turning to studies that have been conducted in the context of human medicine, a variety of which examine how effective communication practices impact the physician-patient relationship and overall patient health (Bonvicini & Keller, 2006; Frankel, 2006; Osborne & Ulrich, 2008; Shaw et al., 2004a). As a veterinarian's primary goal is to improve overall animal health and ensure client satisfaction, the success of encounters between patients and practitioners is dependent on effective communication. Osborne (2008) suggests the communication that takes place between veterinarians and their clients can be a positive interaction and a source of mutual understanding or a source of misunderstanding and frustration, especially when emotions are running high in times of great distress.



A large body of research in human health suggests communication results in many positive health outcomes. Veterinary scholars are beginning to consider the possible benefits of improved communication in veterinary medical encounters (Shaw et al, 2004a). Both veterinarians and physicians have common goals of promoting overall health and ensuring client satisfaction. Furthermore, in both human and veterinary medicine, the medical interview is the one most common sources of communication exchange (Frankel, 2006). It is estimated that physicians conduct an average of 120,000-160,000 medical interviews in a practice lifetime and nearly 80% of diagnoses can be accurately made from the interview alone (Frankel, 2006; Lipkin, Frankel, Beckman, Charon, & Fein, 1995). Veterinarians also conduct many medical interviews in which the main objective is to diagnose and examine the animal.

Veterinary scholars Brandt and Bateman (2006) identified communication as the most widely used “clinical” procedure. Therefore, it is essential for clinicians to be able to effectively communicate with clients during the medical interview in order to achieve better health outcomes and increase satisfaction. The current investigation seeks to expand our understanding of how communication impacts the veterinary-client relationship by seeking to identify important communication components that take place during small animal veterinary medical interviews. Specifically this study looks at veterinary clients’ perceptions of the communication process during the medical interview.

Communication is a core clinical skill used in veterinary medical practice. It has implications in the areas of client satisfaction and pet health. However, little research has focused on communication in the veterinary-client relationships, and even less focuses on patient perceptions of veterinary communication. As a result, this study seeks to expand our understanding of how veterinarians interact with their clients in one context of the veterinarian-

client relationship: the medical interview. The following review examines literature derived from both human and veterinary medicine in order to discuss similarities and draw relevant links between the two fields of study.

### **Literature Review**

This section begins with an examination of the medical interview and its effects on the patient-provider relationship. Next, the importance of communication skills during the medical interview are examined, with an emphasis on areas of research that have been found to be necessary components of a successful medical encounter – patient satisfaction, patient centered care, and relationship centered care. The section concludes with the research questions that guide this study.

### **Medical Interview**

As noted previously, communication research in the veterinary field is quite limited. Just as in human provider patient care, the foundation of a veterinarian’s job is based on the communication that is necessary between the practitioner and animal owner. Improving this overall communication process should enhance diagnostic accuracy, efficiency, supportiveness, relationships and coordination of care, as well as reduce conflict, complaints and malpractice claims (Kurtz, 2006).

The establishment of good relationships during the medical interview is crucial in the success of health interventions as well as successful partnerships, stakeholder endorsement of health issues, and adherence to medical recommendations (Schiavo, 2007). A good relationship between client and healthcare provider creates an environment of “shared meaning and understanding” (Pearson & Nelson, 1991), which is central when seeking behavioral or social change at the individual or community levels. A trusting physician–patient relationship enhances

the patient's readiness to reveal emotional problems and the motivation to participate in the process of decision-making, which in turn is associated with compliance, health outcomes, and general patient satisfaction (Kim, Kaplowitz, & Johnston, 2004; Roter, 2000; Wagner, Lentz, & Heslop, 2002).

Surveys issued to veterinarians most frequently cite communication skills as a necessary asset for a successful practice (Bristol, 2002). Strand (2006) identifies active listening, nonverbal communication, rapport building, the use of both close and open-ended questions, and paraphrasing and reflecting as essential core communication skills that successful veterinarians use on a daily basis, especially during the medical interviewing process. Cegala, Gade, Lenzmeir Broz, and McClure (2004) report that during the medical interview, physicians frequently underestimate patients' desire for information, but tend to overestimate the patients' medical knowledge. Furthermore, failure to communicate effectively sometimes results in death of the pet (Martin, 2006).

A notable similarity between human and veterinary medicine is apparent in the channel in which clinicians communicate with clients (Frankel, 2006; Shaw, Bonnett, Adams, & Roter, 2006). While both physicians and veterinarians increasingly interact with patients and pet owners through e-mail and by phone, both of which require specific interpersonal skills, the medical interview is still the most regularly performed and important activity (Frankel, 2006). The medical interview is a critical event where health disparities may originate (Kilbourne, Switzer, Hyman, Crowley-Matoka, & Fine, 2006).

During the medical interview, communication content can be classified in three different categories: anticipatory guidance topics, biomedical topics, lifestyle and psychosocial topics (Shaw et al 2004a; Shaw et al., 2008). When discussing content that fits into the lifestyle and

psychosocial category, topics generally include areas such as work, lifestyle, mental health, and interpersonal relationships. Biomedical content refers to the discussion of medical conditions and consists of topics such as diagnosis, treatment, and prognosis. Anticipatory guidance refers to the anticipated development of future health issues and maturation (Shaw et al., 2008).

Biomedical talk in veterinary medicine shows many parallels to human medicine. The context of lifestyle discussion is different because clients discuss their pet's social interactions (animal and human interactions and personality) and daily regimen, such as exercise, diet, sleep, and atmosphere (Shaw et al., 2004b). Anticipatory guidance discussions generally fall somewhere in between with topics referring to the animals stages of life, such as training, feeding, changes in behavior, and overall maturation (Shaw et al., 2004b).

Cegala, Coleman, and Turner (1998) support the idea that effective information exchange is the principal task in a medical interview. However, others believe that it is the relational dimension of the medical interview, not information exchange, that is the primary contribution to patient satisfaction and compliance (Nicolai, Demmel, & Farsch, 2010; Thompson & Parrott, 2002). The patient-provider relationship, which is largely established during the medical interview, is important in health outcome. However, the quality of communication between the patient and provider is not always ideal for achieving high levels of medical adherence (Chesney, 2000; Schneider, Kaplan, Greenfield, Li, & Wilson, 2004).

Pet owners are often concerned that veterinarians do not thoroughly examine their pets due to the short amount of time spent directly working with the animal and to the perceptions that the veterinarian does not take time to listen to client concerns. The amount of time veterinarians spend with clients during the medical interview is an important determinant for adherence to medical administration (Grave & Tanem, 1999). According to Osborne (2008),

veterinarians should listen in order to understand the denotation of words, as well as listen to the connotation of underlying words. This also includes taking notes of what is not being said by the pet owner.

**Patient Satisfaction.** One of the main objectives of health communication during the medical interview is to increase patient satisfaction, and, in fact, this topic is frequently at the center of much health communication research (Davis, Foley, Crigger, & Brannigan, 2008; Dutta-Bergman & Mohan, 2005; Kupst, Dresser, Schulman, & Milton, 1975; Wanzer, Booth-Butterfield, & Gruber, 2004). The same can be said for veterinary medicine. As veterinarians become increasingly aware of the impact that effective communication can have on their practice, they are beginning to turn to communication research that has been conducted in human medicine, drawing important links between the two. Veterinarians and physicians share many common goals, including improving patient health and guaranteeing client satisfaction with care (Shaw et al, 2004a). For both patients and pet owners, the success and satisfaction of each medical encounter is dependent upon the relationships and interactions between humans.

While health communication research has addressed a variety of areas, physician-patient interaction, relationship building, and patient satisfaction have received the most attention (Conigliaro, 2007; Davis, Foley, Crigger, & Brannigan, 2008; Kuehn, 2012; Kupst, Dresser, Schulman, & Paul, 1975; Tates & Meeuwesen, 2001). The Institute of Medicine (IOM) (2001a) identifies seven factors of high quality medical care that physicians should focus on, which include being effective, timely, equitable, safe, efficient, patient-centered, as well as focus on the overall patient experience.

A seminal study by Beckman and Frankel (1984) examined medical interviews and revealed that physicians' initial encounters with patients resulted in physicians interrupting 69%

of their patients before they could complete an opening statement, with the average time lapse to the first interruption being approximately 18 seconds. Once patients were interrupted, less than 2% completed their original statement. The lack of effective listening in situations such as these leaves patients dissatisfied, feeling that the information they have to provide is unimportant. It also leaves the potential for important information to be omitted, potentially resulting in misdiagnosis and improper treatment for patients. A more recent study by Li, Koehn, Desroches, Yum, and Deagle (2007) suggests that even though patient satisfaction is much higher when patients are given the opportunity to engage in medical encounters, physicians still tend to exert more control over the content of the medical interview. Li et al. (2007) refer to this as asymmetrical talk, noting that most patients ask very few questions during medical visits.

Other studies have concluded that satisfaction is highest when patients feel that their doctor cares enough to take the time to listen and build a relationship. For example, based on a review of the literature, Conigliaro (2007) suggested that patients were not only more satisfied when they received an extensive amount of information from physicians, but also found that social climate, which includes social conversation, positive talk, partnership building, and positive nonverbal behavior, was another major factor in patient satisfaction. Hall and Dorman (1988) suggest that patients are most satisfied when physicians do not focus solely on topics such as medical condition and treatment methods, but instead ask about psychosocial issues such as problems of daily living, emotions, and social relations. For example, if a physician focuses more on the patient's medical records rather than engaging in eye contact and listening to what the patient is saying, patients often feel that what they are saying is unimportant to the physician. Patients perceive this type of physician behavior as indifferent, making it difficult to establish a good physician-patient relationship (Davis et al., 2008).

Professionalism and effective communication have a profound effect on patient satisfaction with their healthcare experience, which consists of asking and answering questions, engaging in eye contact, listening, and ultimately putting the needs of the client at the center of every encounter (Cerda, Prieto Rodriguez, Perez Corral, Lorenzo, & Danet, 2010). These attributes are central to developing the open communication and patient centered care necessary for every medical interview. Shaw and her colleagues (2004b) report similar findings in their study of veterinarian-client interactions and suggest that a social climate consisting of positive talk, partnership-building, listening, empathy, and positive nonverbal behavior are elements associated with increased client satisfaction.

Norton (1983) conducted research pertaining to open communicative style and concluded that physician-patient interaction is dependent upon the patients' level of active participation during medical interviews. Based on the foundations of Norton's research, Dutta-Bergman (2005) points out that patients who actively participate in communication with their physician have more to say about the medical decisions being made and the outcomes desired, resulting in greater patient satisfaction. Kaplan, Greenfield, Gandek, Rogers, and Ware (1996) observed, "Patients who ask questions, elicit treatment options, express opinions, and state preferences about treatment during office visits with physicians have measurably better health outcomes than patients who do not" (p. 497). Cegala, Marinelli, and Post (2000) also found patient participation to be important predictors of patient satisfaction and compliance. Active patient participation during medical interviews also increases adherence to medical regimens, often resulting in better overall health and patient satisfaction proceeding the medical visit (Street & Millay, 2001). Collaborative decision making between patient and physician not only increases satisfaction, but

also improves medical adherence (Rochon, Buck, Mahata, & Turley, 2006; Rochon, et al., 2011; Sidat, Fairley, & Grierson, 2007).

In a study of pediatric medical interactions, Wanzer, Booth-Butterfield, and Gruber (2004) suggest that patient satisfaction and empathetic communication, listening, and immediacy are related. In their study, parents were surveyed in order to determine the effects of immediacy (physician attention on what client is saying) and listening (eye contact, nodding of head, etc.) in the physician-parent-child relationship. They found that when patients are satisfied, overall health improves. They concluded that positive physician behavior, such as engaging in eye contact, empathic listening, and positive talk, improved patient satisfaction in all facets of healthcare, in part because it reduced uncertainty about provider care. The researchers conclude that when immediacy and listening are absent from healthcare service delivered to their children, parents are less satisfied, resulting in poorer patient health. In such situations, parents are less concerned with informational exchange than being more satisfied with empathy, as well as by being understood by the physician, physician honesty, and proper understanding of treatment regimens (Hirsch et al., 2005; Sparks, Villigran, Parker-Raley, & Cunningham, 2007). These findings may hold true for veterinarian-client interactions. One early study found that pet owners also are dissatisfied when veterinarians fail to provide compassion, courtesy, respect, rapport, and understanding the importance of the veterinarian-client relationship (Antelyes, 1990).

**Patient Centered Care.** Patient centered care is defined as a relationship that focuses primarily on the overall well-being of the patient (Stewart et al., 2001). Patient centered care is an essential component of patient involvement that promotes responsibility for one's health, treatment and medical regimen adherence and ultimately relies on the success of patient centered



medical interviews (Robinson, Callister, Berry, & Dearing, 2008). The Institute of Medicine defines patient-centered care as “a partnership among practitioners, patients, and their families to ensure that decisions respect patient’s wants, needs, and preferences and that patients have the education and support they need to make decisions and participate in their own care ” (IOM, 2001b, p. 7). Patient centered care is a model that is closely linked to patient satisfaction. It has been the focus of much communication research over the last decade (Robinson et al., 2008), including its application to the medical interview. The patient centered approach suggests that patients are not just receiving healthcare, but are also the evaluator of their all healthcare professionals and services (Cerda et al., 2010). Patient centered care is essential to veterinary medicine because it focuses primarily on the health and needs of the pet, making for more satisfied clients and long term veterinarian-client relationships

Little et al. (2001) identifies four main elements of the patient centered care model, which include evaluating the individual’s overall health, promoting health and wellness, exploring the experiences associated with the disease at hand, and strengthening the professional-patient relationship; all of which are useful for the betterment of communication in both the human and veterinary medical interview. These four elements are believed to improve patient satisfaction, better biomedical results, enhanced professional-patient relationships, and decreased anxiety (Kinnersley, Stott, Peters, & Harvey, 2000). Haskard and colleagues (2008) suggest that a collaborative approach to healthcare that involves patient participation, shared decision making, and patient understanding is essential for the development of more advanced relational and communication skills during the medical interview. In the veterinary medical interview, pet owners also want to participate in their pet’s care in order to increase knowledge and pet health.

Robinson et al. (2008) examine patient centered health care from a consumerist standpoint and recognizes the patient's ability to make informed health decisions based on cost, convenience, and quality. However, patient centeredness focuses on more than just meeting consumer demands, instead stressing the formation of partnerships between physician and patient that recognize the patient's desires and demands.

Recent research by Davis, Foley, Crigger, and Brannigan (2008) found that when the interaction between provider and client is a partnership rather than a paternalistic relationship, it acts as a therapy. Medical regimens are more closely followed, patient satisfaction increases, and physicians are less vulnerable to malpractice lawsuits. Furthermore, most of the complaints filed against veterinarians to state medical examining boards are those closely related to poor listening and interpersonal communication skills, further accentuating the importance of good listening and communication skills during the medical interview in terms of client retention and satisfaction (Kogan et al., 2004; Russell, 1994).

**Relationship centered care.** The optimal means for implementing patient centered care in veterinarian-client relationships is with the use of relationship centeredness. Relationship centered care seeks a balance between provider paternalism (e.g., a veterinarian dominated medical interview) and patient autonomy (Shaw et al., 2004b; Wanzer et al., 2004). In human medicine, relationship centered care consists of shared decision making and negotiations in order for physicians (who act as a counselor or advisor) to better understand the patient's perspective. Relationship centered care in the veterinary-client relationship focuses primarily on the needs of the client and building client satisfaction. A necessary element of patient-centeredness is relationship centeredness (Shaw et al., 2004b).

As in human medicine, this type of relationship centered care is a process that represents a joint venture between the client and provider in order to provide optimal care for the animal (Shaw et al., 2004a). In veterinary medicine, the use of relationship centered care forms a partnership between veterinarian and owner to ensure optimal care is provided to the animal. Veterinarians must also consider the role the animal plays in the life of the owner (Shaw et al., 2004a). Like physician-patient communication, veterinarian-client communication often involves a series of asking and answering questions during the medical interview in order to diagnosis the problem.

For example, pediatricians communicate with parents in a very similar manner in which veterinarians communicate with pet owners. Both instances involve a series of asking and answering questions in order to diagnosis the problem of a third party (Shaw et al., 2006). In fact, much of the early research in health communication took place in the pediatric setting, exploring the relationship between parent and physician. This research suggests that improved quality of care and increased symptom relief is directly related to the relationship between parent and pediatrician (Korsch, Gozzi, & Francis, 1968; Koshti-Richman, 2008; Rider, Volkan, & Hafler, 2008; Tates & Meeuwesen, 2001). Because the communication variables and methods used in pediatric studies are relevant to veterinary medicine, the pediatrician-parent-child relationship is very similar to the veterinarian-client relationship (Shaw et al., 2004b).

Clear and consistent communication result when positive and effective parent-pediatrician alliances are in place. Poor communication and negative interactions stem from time constraints that are placed on medical interviews and insufficient appreciation of parents' knowledge by physicians (Fisher & Broome, 2011). In a study conducted by Ammentorp, Mainz, and Sabroe (2006), several issues related to parental satisfaction were identified with two

of the most important being: (a) parents' need for answers to questions and (b) positive behaviors from physicians and nurses, such as kindness, care and warmth, and taking parents' experiences with their children seriously. Pet owners are experts on their pets' behaviors just as parents are experts on their child's behavior (Shaw et al., 2004b).

An open and balanced physician-patient relationship consisting of listening, empathy, and encouragement can be very therapeutic to patients. It decreases anxiety with medical interviews and increases adherence to medical regimens. As seen here, this relationship has direct effects on benefits and outcomes of the patient's health (Davis et al., 2008). Physicians who lack empathy end up with patients who are dissatisfied with their treatment (Larson & Yao, 2005). However, when effective communication patterns are used during medical encounters, positive outcomes (largely due to higher adherence) result (Roter, Hall & Yukata, 2002). At least one study suggests that the findings hold true for the veterinarian-client relations. Kogan and her colleagues (2004) suggests that client relations (e.g., listening, empathy, interpersonal skills) and good communication skills to be related to client satisfaction.

In a study focusing on improving parent-pediatrician communication, Latta, Dick, Parry, and Tamura (2008) reported that parents appreciated three things- being asked their opinion, being respected and being listened to. In a more recent study, Nunes and Alaya (2010) found that parents often do not receive all the information they need during medical interviews. Parents often failed to ask the pediatrician for information about their concerns because they think there is a lack of interest on the part of the physician as well as a lack of time (Bethel, Peck, Schor, 2001; Nunes & Alaya, 2010; Schuster, Duan, Regalado, & Klein, 2000).

All children are dependent on their parents for care, but especially those who have ongoing medical issues. Outside of their typical parental roles, parents must become medical

experts, care coordinators, and personal representatives and ambassadors for their child (Kratz, Uding, Trahma, Villareale, & Keickhefer, 2009). Due to this, the emotional and social impact of parenting children with these kinds of needs is substantial. One study reports that families in this type of situation often experience emotional exhaustion, anxiety, and hyper-vigilance (Orbuch, Parry, Chesler, Fritz, & Repetto, 2005). While special needs pets rarely require as much attention as special needs children, pet owners may experience similar emotions, especially those with close bonds to their pets. Veterinarians who implement empathy, warmth, understanding, and encouragement during the medical encounter can help pet owners with chronically ill pets.

Recent studies with children and their parents associated the relationship centered care model with satisfaction (Nobile & Drotar, 2003), and more specifically, suggest caregivers should use interpersonal communication skills such as praise for parents, empathy and collaboration to improve the health encounter (Hart, Kelleher, Drotar, & Scholle, 2007). Furthermore, many complaints from the public sector about general healthcare, and more specifically, about physicians, are associated with communication issues, particularly poor interpersonal communication between physician and patient (Rider et al., 2008). In veterinary medicine, Martin (2006) states that a common thread in many complaint cases is the breakdown of communication. Coe, Adams, and Bonnett (2007) suggest that clients often leave veterinary medical interviews with unmet needs due, in part to veterinarians' misperceptions of their clients' expectations.

Listening is a vital communication component of the medical interview that brings self-awareness and educational development to medical encounters when it is used effectively. The first step in improving communication and avoiding unnecessary mistakes is learning how to listen (Humble, 1996). Competent veterinarians should be able to empathize with their clients by

ensuring that they are being listened to, understood, and confirmed (Strand, 2006). Epstein (2003) refers to “unfinished curiosity” as the ability for a practitioner to absorb new medical or interpersonal data that changes the course of medical decision making or conversational response. The mindful practitioner displays curiosity and continually asks questions regarding the treatment of patients and interpersonal communication.

Uncertainty is largely present in most human and animal medical encounters, especially if clients are seeing the physician or veterinarian for the first time (Gawande, 2002). Clients experience uncertainty about illness which is in part due to the complexity of the illness, concerns about the reliability of information available, and the presence of knowledge about the illness (Babrow, Hines, & Kasch, 2000). Brashers, Neidig, Haas, Dobbs, Cardillo, & Russell (2000) suggest that in order to reduce uncertainty, clients, seek information and other alternatives by effectively communicating with their medical professionals. Medical professionals also experience uncertainty and research suggests that the communication of that uncertainty empowers clients to be actively involved in decisions about treatment options and can increase patient satisfaction (Gordon, Joos, Byrne, 2000; Mellanby, Crisp, De Palma, Spratt, Urwin, Wright, & Zago, 2007).

The literature provided in this section examined three different areas of human and veterinary communication research that are relevant to the veterinary medical interview. First, we discussed the effects of patient satisfaction on the medical interview. Second, the effects of patient centered care and relationship centered care, two models closely linked to each other as well as patient satisfaction were examined.

### **Research Questions**

As suggested by human and veterinary health communication literature, there appear to be many common communication practices between the two fields in terms of the medical interview. However, few studies have examined communication interactions associated with the medical interview (Shaw et al., 2004a; Strand, 2006). Fewer studies have focused on patient perceptions of veterinarian communication behaviors during the veterinary medical interview (Frankel, 2006; Osborne & Ulrich, 2008; Shaw et al., 2004a). This study explores perceptions of recent medical interviews. Three research questions are explored:

**RQ1:** What are common communication behaviors veterinarians engage in during the veterinary medical interview?

**RQ2:** Which communication behaviors do clients identify as most important to their interactions with their veterinarian?

**RQ3:** Which patient and relationship factors are most predictive of client satisfaction?

### **Methodology**

In order to address the research questions, a survey was designed to assess client perceptions of veterinarian-client communication during the veterinary medical interview. An overview of the research design, participants, survey design and data analysis techniques are presented below.

Surveys are widely used in communication and social science research in order to produce information to direct questions. There are many types of surveys, which include interviews, content analysis, observation, and questionnaires. For the purposes of this study, a questionnaire was chosen for data collection. DeVaus (1996) states that “the questionnaire is a

highly structured data collection technique whereby each respondent is asked much the same set of questions” (p. 80).

## **Design**

This exploratory study uses a survey design based on the primary analysis of data collected from the direct distribution of a veterinary client participation survey. This study is specifically designed to examine small animal veterinary clients’ perceptions of their veterinarians’ communication behaviors during the veterinary medical interview. Because very little research has been conducted addressing client satisfaction and relationship centered care during the veterinary medical interview, the items in this questionnaire are adapted from previous research in human health communication conducted by Cohen (1996) and Dutta-Bergman (2005).

There are both advantages and disadvantages to direct survey distribution. The first advantage is that surveys are administered at the time of service and are returned when finished, which increases participation. However, when participants are provided with the option to mail the directly to the researcher, such as in this study, response levels tend to decrease. A disadvantage of direct survey distribution is testing bias because participants are more likely answer questions in a manner that is most pleasing to the researcher or distributor (deVaus, 1996). To achieve the best results, a combined approach of direct distribution and mailed surveys was chosen in order to increase return rates and to limit participant bias.

## **Participants**

As mentioned above, the data for this study was gathered through the administration of a survey to clients of seven veterinary clinics within a twenty five mile radius of Auburn University in Auburn, Alabama in May 2012. Fifty individuals completed the survey. All



veterinary practices chosen for the study were small animal clinics. Individuals who completed the survey could either place it in a sealed box located in the veterinarian's office or mail it to the researcher in a provided, self-addressed and stamped envelope. Permission to administer the survey was provided by the practicing veterinarians chosen for the study and approval of the use of the survey was given by Auburn University Institutional Review Board.

Of the participants, 80% were female, 18% were male, and 2% did not specify. All participants but one identified their ethnicity. The overwhelming majority of participants were Caucasian (94%), while remain participants identifies themselves as Hispanic (4%). Respondents indicated their age range: 36% were 19-29 years of age, 16% were 30-39 years of age, 14% were 40-49 years of age, 18% were 50-59 years of age, 12% were 60-69 years of age, and 4% were 70+. Participants were also asked to identify how long they have been visiting their current veterinarian and 66% stated 0-5 years, 14% said 6-10 years, and 20% said 11+ years.

## **Survey**

The self-report survey was comprised of twenty seven closed ended, multiple choice questions divided into four sections (See Appendix A). The four sections addressed issues associated with the medical interview, relationship centered care, patient satisfaction, and pet owner demographics and background information.

The first section of the questionnaire consisted of questions pertaining to the "medical interview." A total of three questions were asked during this section. First, seven communication behaviors were provided as well as an "other" response category where respondents could list an additional behavior. All communication behaviors were derived from Cohen (1996) and Dutta-Bergman (2005). Participants were asked to identify those used by the veterinarian during their pet's appointment. Next, participants were asked to rank in order the

three communication behaviors they felt were most important to them. These behaviors could include those used by their veterinarian during the medical encounters or they could list other communication behaviors. Examples of behaviors provided in the first question included “maintained eye contact,” “listened carefully,” “used humor,” etc. (See Appendix A). The final item in this section concluded with a multiple choice question addressing tools used to help explain diagnoses and procedures during the medical interview (e.g. “website,” “demonstration,” “PowerPoint,” “brochures,” etc.).

The second section addressed information regarding “Relationship Centered Care.” The questions in this section were derived from a Dutta-Bergman (2005) study that examined provider-patient communication in relation to satisfaction with care. There were seven Likert scale questions (e.g. 1 = strongly disagree, 5 = strongly agree) located in this section. All questions addressed the presence/absence of communication behaviors that demonstrate relationship centered care. Questions addressed whether participants felt like they had the undivided attention of the veterinarian, as well as whether involvement in the medical encounter was encouraged (e.g. were participants encouraged to ask questions, did they work with the veterinarian to make decisions together and develop a solution). Other items in this section examined information regarding the explanation of the procedure and providing an explanation of the prognosis a on level in which the participant understood.

The third section of the survey probed for information regarding patient satisfaction. There were seven questions in this section, all of which were closed-ended Likert scale (strongly agree to strongly disagree) questions. Specifically, questions in this section asked the participant to provide information regarding his/ her level of satisfaction with the medical encounter based on the amount of time spent with the pet, the veterinarian’s medical knowledge, and information

provided about the pet's health during the encounter. Questions also addressed the friendliness and helpfulness of the veterinary staff, a factor which greatly affects a client's visit. This subsection concluded with a question that pertained to addressing to the participant's overall satisfaction of the communication methods used throughout the veterinary medical encounter.

The final section collected demographic and background information and asked participants to provide information regarding the reason for their visit, how they selected their veterinarian, and length of waiting time for their appointment. All five questions were closed-ended, multiple choice questions. For example, participants were asked to provide information about the estimated amount of time they had to wait to see the veterinarian and whether or not they had a previously scheduled appointment. Next, participants were asked to identify the type of animal that was seen during the appointment (e. g. dog, cat, other) as well as the reason for the visit (e. g. check-up, follow-up, emergency, etc.). The last question in this section addressed how the client came to choose their veterinarian (e. g. word of mouth, online, advertisement, etc.). Refer to Table One.

### **Data Analysis**

As mentioned previously, the survey incorporated the use of closed ended, multiple choice questions allowing for the use of survey analysis. In this study, descriptive statistics, such as percentage distributions and frequency of data will be used for the analysis of all questions. IBM SPSS Version 19.0 computer software was used to analyze all responses.

This chapter explained the methodology used for this study. A questionnaire was chosen as the means of data collection. Also, the relationship between the research questions for this study and the questionnaire items was established in this section. The next chapter will present the analysis of the questionnaire collected data.

## **Results**

This study examines client perceptions of veterinary communication during the veterinary medical interview. This chapter includes demographic results as well as results for each research question. At the completion of data collection, fifty usable surveys were received from clients of participating small animal veterinary clinics. Survey respondents answered questions about the communication behaviors their veterinarian used during their medical encounter, client satisfaction levels, and client demographics.

A descriptive analysis was employed to explore responses associated with the first two research questions – common communication behaviors of veterinarians and which communication behaviors are most valued by clients. Analysis for research question three utilized a regression analysis to predict which of the 14 patient and relationship-centered factors were most predictive of client satisfaction. IBM SPSS Version 19.0 software was used to conduct the descriptive and regression analyses.

### **Demographic and Background Information**

As noted previously, the overwhelming majority of survey participants were female (80%), with most being under the age of 40 (52%) (see Table 1). Most respondents noted that the pet being examine was a dog (82%) rather than a cat (14%), while a few had other pets (4%). A variety reasons for visiting the veterinarian were selected with check-up being selected most frequently (58%). The vast majority of clients waited ten minutes or less (82%) to see their veterinarian and most also had a previously scheduled appointment (88%). Most clients have been visiting their veterinarian for five years or less (66%) and most had heard about their veterinarian either by a friend's recommendation (46%) or word of mouth (26%).

Table 1  
Demographics

| Communication Behavior                       | <i>n</i> | Percentage |
|--|----------|------------|
| <b>Time waited to see Veterinarian</b>       |          |            |
| 0-10 minutes                                 | 41       | 82%        |
| 11-20 minutes                                | 6        | 12%        |
| 21-30 minutes                                | 3        | 6%         |
| 31+ minutes                                  | --       | --         |
| <b>Scheduled Appointment</b>                 |          |            |
| Yes  | 44       | 88%        |
| No   | 4        | 8%         |
| <b>Number of years visiting veterinarian</b> |          |            |
| 0-5 years                                    | 33       | 66%        |
| 6-10 years                                   | 7        | 14%        |
| 11+ years                                    | 10       | 20%        |
| <b>Gender</b>                                |          |            |
| Male   | 9        | 18%        |
| Female                                       | 40       | 80%        |
| Rather not specify                           | 1        | 2%         |
| <b>Type of Animal Examined</b>               |          |            |
| Dog  | 41       | 82%        |
| Cat  | 7        | 14%        |

|                                 |    |     |
|---------------------------------|----|-----|
| Other                           | 2  | 4%  |
| Reason for Visit                |    |     |
| Check up                        | 29 | 58% |
| Follow-up visit                 | 5  | 10% |
| Emergency                       | 4  | 8%  |
| Chronic Illness                 | 5  | 10% |
| Other                           | 1  | 2%  |
| Method of choosing Veterinarian |    |     |
| Word of mouth                   | 13 | 26% |
| Friend's recommendation         | 23 | 46% |
| Online search/ website          | 5  | 10% |
| Telephone book                  | 1  | 2%  |
| Advertisement                   | 1  | 2%  |
| Other                           | -- | --  |
| Age                             |    |     |
| 19-29                           | 18 | 36% |
| 30-39                           | 8  | 16% |
| 40-49                           |    |     |
| 50-59                           | -- | --  |
| 60-69                           | 7  | 14% |
| 70+                             |    |     |

|                    |    |     |
|--------------------|----|-----|
|                    | 15 | 30% |
|                    | 2  | 4%  |
| Ethnicity          |    |     |
| White              | 47 | 94% |
| Hispanic           | 2  | 4%  |
| Rather not specify | 1  | 2%  |

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**Research Question 1**

The first research question asked, “What are common communication behaviors veterinarians engage in during the veterinary medical interview?” Question one of the survey was designed to address this research question. The survey item asked participants to choose from a list of communication behaviors that their veterinarian may have engaged in during the medical interview. Six choices were offered (e.g., direct eye contact, providing detailed explanations, friendly behavior, listening, humor, and pleasant tone of voice) as well as an “other” option, which allowed respondents to identify additional communication behaviors that were not listed. Participants were asked to circle all behaviors they observed during the medical interview with their veterinarian.

As seen in Table Two, of the six communication behaviors that were offered, none were circled less than 82% of the time. “Listened carefully” was most frequently circled by participants (n = 49), while “engage in friendly behavior” was chosen the second most frequently (n = 48). “Maintained direct eye contact” and “used pleasant tone of voice” tied as third most frequently chosen. Ten individuals (20%) also circled the seventh variable, “other,” identifying

additional communication behaviors they observed during the veterinary medical encounter. A review of these responses found that examples of these “other” behaviors included, “focused on what was being said,” “took time,” “offered treatment options,” and “took pet to back room to conduct exams.” Half of these participants who wrote in answers (n = 5) also listed behaviors related to showing interest in the pet. However, because this is not a communication behavior, it was not analyzed. These responses were grouped as an additional communication behavior. Responses placed in this category include: empathy, answering all questions, knowledge, focus on what client was saying, and clearly states prognosis. All results associated with Research Question One are provided in Table 2.

Table 2

*Communication Behaviors used by Veterinarians during the Medical Encounter*

| Communication Behavior                            | <i>n</i> | Percentage |
|---|----------|------------|
| Maintained Direct Eye Contact                     | 47       | 94%        |
| Provided a Detailed Explanation of What was Wrong | 41       | 82%        |
| Engage in Friendly Behavior                       | 48       | 96%        |
| Listened Carefully                                | 49       | 98%        |
| Used Humor  | 41       | 82%        |
| Used a Pleasant Tone of Voice                     | 47       | 94%        |
| Other*  | 10       | 20%        |
| Showed interest in pet                            | 5        | 10%        |

\* A review of “other” responses found that five responses could be grouped based on the focus of the communication behavior.



## Research Question 2

The next research question asked, “Which communication behaviors do clients identify as most important to their interactions with their veterinarian?” Survey question two was designed to examine this research question. The survey question asked participants to choose three of the six communication behaviors provided in survey question one and rank them according to personal importance beginning with most important and ending with the third most important. Participants were also given the option to write in additional communication behaviors that were not listed.

As seen in Table Three, of the variables provided, “providing a detailed explanation of what was wrong” (26%), “listened carefully” (26%), and “maintained direct eye contact” (24%) essentially tied in terms of the number of respondents ranking them as the most important communication behavior a veterinarian should utilize. As noted above, participants could also enter additional “other” communication behaviors. Eight participants identified “other” answers as most important. Responses were reviewed and grouped by the broad communication behavior they represented (e.g. empathy, answering questions, appeared knowledgeable). Only categories two or more responses are presented in Table Three. As seen in Table Three, “empathy” was listed three times and “answering questions” was listed the least frequently. The use of a pleasant tone of voice was not ranked by any participants as a “most important” communication behavior.

In terms of the second most important communication behavior, “providing a detailed explanation” received the most responses (26%, n = 13), followed by “listened carefully” (18%, n = 13) and “engaged in detailed explanation” (16%, n = 8). In comparison to the Most Important Ranking, a greater number of “other” communication behaviors were listed in the Second Most

Important category (26%, n = 13). “Listened carefully” was also selected nine times and “engaged in friendly behavior” was selected 8 times. Using the same procedure described above, other communication behaviors were grouped into broad categories (e.g., empathy, knowledge, clearly providing a prognosis and options for treatment, and seeing the exam conducted in front of the client). As with most important ranking, empathy again was listed (4%, n = 2). Other results for additional communication behaviors are presented in Table Two.

Similar to the second most important grouping, the variables most frequently selected in terms of third most important communication behavior included “listened carefully” (20%, n = 10) as well as the variable “other” (20%, n = 10). The answers selected in the “other” category fell into three broad categories: “being knowledgeable,” “clearly stating prognosis,” and “discussing treatment options.” However, while being knowledgeable is important, it is not, in and of itself, classified as a communication behavior. As before, responses were only included if three or more participants listed them as an important communication behavior. Examples of excluded behaviors included feeling confident that pet was examined thoroughly and took time as well as honesty.

Table 3  
*Most Important Communication Behaviors used by Veterinarians during the Medical Encounter*

| <u>Communication Behavior</u>                     | <u>Level of Importance Ranking</u> |          |               |          |              |          |
|---|------------------------------------|----------|---------------|----------|--------------|----------|
|   | <u>First</u>                       |          | <u>Second</u> |          | <u>Third</u> |          |
|   | <i>n</i>                           | <i>%</i> | <i>n</i>      | <i>%</i> | <i>n</i>     | <i>%</i> |
| Maintained Direct Eye Contact                     | 21                                 | 24%      | 3             | 6%       | 6            | 12%      |
| Provided a Detailed Explanation of What was Wrong | 13                                 | 26%      | 13            | 26%      | 7            | 14%      |

|  |     |      |    |      |     |      |
|--|-----|------|----|------|-----|------|
| Engage in Friendly Behavior                        | 3   | 6%   | 8  | 16%  | 7   | 14%  |
| Listened Carefully                                 | 13  | 26%  | 9  | 18%  | 10  | 20%  |
| Used Humor   | 1   | 2%   | 1  | 2%   | 1   | 2%   |
| Used a Pleasant Tone of Voice                      | --- |      | 1  | 2%   | 4   | 8%   |
| Other  | 8   | 16%  | 13 | 26%  | 11  | 22%  |
| Answering questions                                | 2   | 4%   | 1  | 2%   | --- |      |
| Empathy  | 3   | 6%   | 2  | 4%   | --- |      |
| Knowledgeable                                      | --- |      | 1  | 2%   | 3   | 6%   |
| Clearly stated prognosis and options for treatment | 1   | 2%   | 1  | 2%   | 2   | 4%   |
| <i>Total</i>                                       | 50  | 100% | 48 | 100% | 46  | 100% |

*Note:* The N for all items was 50.

### **Research Question 3**

The third and final research question asked, “Which patient and relationship factors are most predictive of client satisfaction?” The 14 Likert scale survey questions related to Relationship Centered Care and Patient Satisfaction were used as the independent variables in the regression analysis designed to address this research question. For each item, participants circled the answer that they agreed with most (1=Strongly Agree to 5= Strongly Disagree).

The seven items related to relationship centered care asked participants to answer questions about various specific communication processes that their veterinarian implemented during the medical exam. Examples of these questions include, “I had my veterinarian’s full attention,” “I was encouraged to ask specific questions about my pet’s health,” and “My veterinarian and I work together to manage my pet’s health” (See Table 3 and Appendix A for a

listing of all questions). Six of seven questions that composed the patient centered items asked participants to answer questions pertaining to their satisfaction with various aspects of the veterinary medical encounter, such as “spent adequate amount of time examining my pet,” “My veterinarian was knowledgeable about veterinary medicine,” and “My veterinarian provides me with practical information about my pet’s health.

The dependent variable for the regression analysis was the survey item that asked participants to rate their overall experience with their veterinary visit (1=Very Satisfied to 7=Very Dissatisfied). A stepwise regression was employed to answer this research question. A stepwise regression was used to examine common answers to questions as well as determine predictor variables to client satisfaction. As stated by Hinkle, Wiersma, & Jurs (2003), a stepwise regression is a variation with a forward solution that only identifies predictors that contribute significantly to the regression. Stepwise regression allows the researcher to provide a more parsimonious account of the variance of the criterion variable (Kachigan, 1991). It is very useful because it allows the researcher to use a large number of independent variables and matching them with a large number of dependent variables (Wimmer & Dominick, 2006). However, if used improperly, a poor model results and few or no significant variables may emerge.

Results of the regression analysis indicated that two of the 14 items were predictive of client satisfaction. The relationship-centered item, “during the visit, I felt that I had my veterinarian’s full attention,” and the patient satisfaction item, “I feel that my veterinarian provides me with practical information about my pet’s health” were most predicted of a client’s general satisfaction with their visit. Specifically, “paying attention” was entered in the first step of the analysis ( $R^2 = .777$ ,  $F(1,45) = 156.59$ ,  $\beta = .863$ ,  $p < .001$ ), while “being provided with

practical health information” was entered in the second step ( $R^2 = .800$ ,  $F(1, 44) = 87.92$ ,  $\beta = .403$ ,  $p < .001$ ). No other items entered into the regression equation. The results from this investigation suggest that when the two predictor variables are employed, clients tend to be more satisfied. Both predictors explain a sizable proportion of variance (see Table 4).

Table 4  
*Communication Behaviors Predictive of Client Satisfaction*

| Predictor Variables*  | $\beta$ | $SE \beta$ | $R^2$ | $Adj. R^2$ | $p$  |
|---|---------|------------|-------|------------|------|
| Step 1  |         |            |       |            |      |
| During the visit, I felt I had my veterinarian’s full attention.                          | .863    | .117       | .777  | .772       | .001 |
| Step 2  |         |            |       |            |      |
| I feel that my veterinarian provides me with practical information about my pet’s health. | .403    | .179       | .800  | .791       | .029 |

\*Step 1:  $F(1,45) = 156.59$ ; Step 2:  $F(1, 44) = 87.92$

### Discussion

At this point in the study, a review of literature from the fields of both human and veterinary health communication has been presented. Research questions were formed and tested in order to examine client perceptions of their veterinarian’s use of communication behaviors during the medical interview and to explore the link between veterinarian communication behaviors and client satisfaction. Based on the research questions, a survey was developed and administered to veterinary clients. The results have been analyzed and reported. In this final section, survey results, study limitations, and suggestions for future research will be discussed.

As noted in the review of literature, most communication research in veterinary medicine is found in professional journals and industry magazines and has been written by veterinarians for veterinarians (Shaw et al., 2004a; Strand, 2006). Because very little research has been conducted on communication behaviors in veterinary medicine, scholars must turn to research conducted in the field of human health communication in order to examine how effective communication practices impact the physician-patient relationship and overall patient health (Bonvicini & Keller, 2006; Frankel, 2006; Osborne & Ulrich, 2008; Shaw et al., 2004a). The main objective of the present study was to explore client perceptions of the use of veterinary communication behaviors during the medical interview. Participant responses identified communication behaviors clients believe are important to the veterinary medical interview and that were associated with greater client satisfaction.

The first research question sought to identify common communication behaviors that veterinarians engage in during the veterinary medical interview. Participants were provided with a list of common communication behaviors that their veterinarian may have demonstrated during the medical interview. Respondents were also given the option to write in additional behaviors that were not listed. The communication behaviors most frequently listed by participants included: listened carefully, maintained direct eye contact, engaged in friendly behavior, and used a pleasant tone of voice.

Strand (2006) found that listening, rapport building, and nonverbal communication are among the most common communication behaviors that veterinarians use. Clients rely on the use of communication behaviors to establish an effective, trusting, open veterinarian-client relationship (Davis et al., 2008). In human health, Cerda et al. (2010) points out that the use of effective communication has a large effect on patient satisfaction with the overall healthcare

experience, and consists of engaging in eye contact, asking and answering questions, listening, and putting the needs of the client at the center of every medical encounter. Findings from this study suggest that several of the human health communication behaviors identified by Cerda et al. are also perceived to be important by veterinarian clients. Just as in the Cerda et al. study, results of this study found that clients find the use of eye contact, listening carefully, answering questions, and ultimately providing undivided attention to be important to veterinary medical interaction.

Research Question Two asks which communication behaviors clients identify as most important to their interactions with their veterinarian. Participants were asked to list three communication behaviors they find most important and list them in order. Participants were again given the option to write in additional answers. The behaviors that were most frequently listed as “most important” included maintaining direct eye contact, listening carefully, and providing a detailed explanation of what was wrong. Additionally, these same behaviors were also most frequently selected as second and third most important. Thus, while some clients may emphasize one of these behaviors over the others, all three were repeated listed as important communication behaviors in the veterinarian-client medical interviews. Additional frequently selected answers included: empathy, answering questions, and clearly stating prognosis provided by participants.

The results for this research question are consistent with the Little et al.'s (2001) human health communication study, which assessed patients' communication behavior and patient centeredness preferences during the human medical encounter. The main goal of the Little et al. study was to examine and identify patient's preferences for a patient centered medical consultation. Results revealed that patients strongly prefer a patient centered approach,

consisting of communication, partnership, and health promotion variables. Interestingly, the communication variable examined in the Little et al. study is most closely related to the present study and presents descriptive data and factor analysis describing what patients want from their general practitioner. Some of the behaviors found to be important to patients include listening, explaining what the problem is, and being friendly and approachable. While maintaining direct eye contact was not provided on this list, it has been argued previously that healthcare professionals who engage in direct eye contact appear more approachable and interested in developing a professional relationship (Davis et al., 2008). Partnership, the second variable of the Little et al. (2001) study, relates closely to the communication behaviors clients listed in the “other” category of the present study, such as empathy and answering questions. As previously mentioned, Davis et al. (2008) suggest that open and balanced physician-patient relationship consisting of listening, empathy, and encouragement can be very therapeutic to patients because not only does it decrease anxiety with medical interviews, but it also increases adherence to medical regimens.

The communication behaviors found to be important in this study make up a very short list of behaviors clients desire when communicating with their veterinarians. That is to say there are many other communication behaviors that contribute to client satisfaction and the success of the veterinarian-client encounter. As mentioned previously, a review conducted by Conigliaro (2007) suggests that in addition to exchanging medical information, patients also find social conversation and positive talk to be important to communicating with their healthcare professional. Another study conducted by Ammentorp, Mainz, and Sabroe (2006) suggests that parents of sick children find it important that their experiences with their children’s health be taken seriously by the physician, which is also true for veterinary medicine. Implications for the



results of the current study suggest that clients are not only interested in informational exchange but are also concerned with interpersonal interaction with their veterinarian. The three communication behaviors that were selected as most important are all based on veterinarians focusing on the direct interaction with the client. These findings are similar to the Nicolai et. al. (2010) study, which suggests that the relational dimension of the medical interview, not information exchange, is a primary contributor to patient satisfaction.

Fisher and Broome (2011) also found in their pediatric study that physicians whose behaviors result in poor communication and negative interactions usually stems from time constraints placed on medical interviews. While it was not mention frequently in the present study, several survey participants provided additional answers related to the veterinarian spending an adequate amount of time examining the pet and communicating the medical process to the client.

The most revealing results came from analyzing results from research question three and asked what patient and relationship factors are most predictive of client satisfaction? Survey items associated with patient centered care and relationship satisfaction were used to identify veterinary communication behaviors predictive of client satisfaction. The two variables that were found to be significant predictors of client satisfaction: (1) During the visit, I felt I had my veterinarian's full attention; and (2) I feel that my veterinarian provides me with practical information about my pet's health. When these predictor variables are employed by veterinarians, clients are more likely to be satisfied with their visit with their vet.

The first predictor variable, "During the visit, I felt I had my veterinarian's full attention," clearly connects to the findings associated with research questions one and two. As seen above, clients feel that listening carefully and maintaining direct eye contact are both

important to the interaction with their veterinarian. Clients are more likely to feel that their veterinarian is paying attention to what they have to say if the veterinarian is engaging in direct eye contact and listening carefully. These findings reflect those reported by Shaw and her colleagues (2004b). The main objective of their study was to examine and report advances the field of human health communication in order to draw links to communication in veterinary medicine. Through their research, a rationale for the development of communication research and education programs emerged. The same study also reported that veterinarian-client interactions, which include a social climate consisting of positive talk, partnership-building, listening, empathy, and positive nonverbal behavior are elements associated with increased client satisfaction. A similar study conducted in pediatric healthcare by Wanzer et al. (2004) concluded that when physicians engage in eye contact, empathic listening, and positive talk, patient satisfaction tends to increase. Wanzer et al. also found that when immediacy and listening are absent from healthcare service delivered to their children, parents are less satisfied, which results in overall in poorer patient health.

Thus, the present study's findings emphasize the importance of nonverbal communication behaviors as indicators that the veterinarian is paying attention to the client. As noted previously by Humble (1989), when listening attentively, veterinarians make it clear that the client's story is valuable, which is a powerful tool for successful veterinarian-client relationships. Osborne and Ulrich (2008) also point out that not only are listening skills essential for accurate evaluation of a pet's illness, but empathic listening conveys our interest in the overall welfare of the client and pet. Furthermore, if clients feel that veterinarians value what they say, trust is more likely to increase while uncertainty decreases. This makes clients more comfortable disclosing more information about their pet, leading to a more successful medical

encounter. The use of friendly eye contact promotes trust, and can add emphasis to what is said, making it more likely that clients to listen to veterinarians and comply with medical recommendations Osborne (2008).

The second predictor variable, “I feel that my veterinarian provides me with practical information about my pet’s health,” is also linked to findings from research questions one and two. For example, one of the communication behaviors clients ranked as most important included “Providing a detailed explanation of what was wrong [with the pet],” which is a process of the veterinarian providing information to the client. This finding is closely related to results of a study conducted by Kinnersley et al. (2000). Kinnersley and his colleagues identified several elements that improved patient satisfaction, among them: clearly communicating biomedical results and enhancing the professional-patient relationships. When clients are provided with a detailed explanation of their pet’s prognosis, they are better prepared to participate in the decision making process with their veterinarian. In a human health communication study, Haskard and colleagues (2008) suggest that a collaborative approach to healthcare involving patient understanding of what is going on, shared decision making, and patient participation is essential for the development of more advanced relational and communication skills during the medical interview, which lead to patient satisfaction. Results of this study suggest that in the veterinary medical interview, pet owners are also more satisfied when they are informed and given the opportunity to participate in their pet’s care.

The results for the current study also showed that 96% of survey participants reported that they are either satisfied or very satisfied with the communication behaviors that their veterinarian employs. Data collected for research question one indicates that over 80% of survey participants said that their veterinarians listened carefully, engaged in direct contact, and

provided a detailed explanation of what was wrong with the pet. It appears that in this study, Clients whose veterinarian employed these specific communication behaviors tended to be more satisfied with their veterinary medical encounter.

While the variables found to be predictors of client satisfaction are very relevant and supported by previous research, that does not mean that other communication variables do not also contribute to client satisfaction. For example, data collected for research question one found that veterinarians often engage in friendly behavior and used a pleasant tone of voice when speaking to clients. Such communication behaviors likely also contribute to overall client satisfaction for those participants who stated that they are either satisfied or very satisfied with their veterinarian's care. As mentioned previously, Wanzer et al. (2004) applied uncertainty reduction theory to a variety of caregiver communicative behaviors and their relationship to positive responses from parents and their children. They found that improving "friendliness" and reducing parent uncertainty with the use of personal introductions, clear explanations, the incorporation of warm nonverbal cues, and the use of empathic listening were all associated with increasing parent and patient satisfaction. Wanzer et al. (2004) concluded that "clusters" of patient centered communicative behaviors are strongly related to patient satisfaction with their healthcare encounters.

Similarly, a Ammentorp et al. (2006) pediatric study sought to investigate determinants of parents' priorities and satisfaction in relation to their child's care as well as examine the relationship between fulfillment of parental expectations and satisfaction. Their study was conducted in a pediatric acute care inpatient facility and found that a variety of communication behaviors contribute to parental satisfaction, including the provider's ability to express warmth,

care, and friendliness. From these studies, it is possible that other communication behaviors outside of those predicted can contribute to client satisfaction in the present study.

### **Conclusion**

This study found that veterinarians employ a variety of communication behaviors when interacting with clients during veterinary medical encounters. Veterinary clients also expect a variety of communication behaviors to be used by their veterinarian during interaction, ranging from listening and empathy to engaging in nonverbal behavior and clearly explaining the pet's prognosis. While many behaviors contribute to client satisfaction, this study found that clients are most likely to be satisfied when veterinarians focus on the client and pay attention to what is being said. Clients want to know that what they say is being heard, which leads to a more open and trusting veterinarian-client relationship. It was also found that clients are more likely to be satisfied when veterinarians provide useful information about caring for the pet. This allows clients to take home what they have learned and to not only employ better practices when caring for their pet, but effective communication may also increase adherence to medical recommendations, resulting in healthier and happier pets.

### **Limitations**

An obvious limitation to this study is the small number of survey participants. However, because only seven veterinary clinics were asked to participate in the study, there was a limited population available. Furthermore, if that study was conducted over a period longer than four weeks, the number of participants would most likely be higher.

Because the current study is a pilot study designed to explore useful communication behaviors that veterinarians employ, it was developed on a small scale and meant to be distributed to veterinary offices within a limited geographic area, resulting in a relatively small

number of clinics to participate in the study. If the study were to be expanded to reach a larger area in order to include more clinics, a larger variety of clients could be recruited, resulting in data that is more predictive of client satisfaction.

Finally, this study employed two methods for participants to return completed surveys: mail and an in-office drop box. However, the number of surveys that were received through mail correspondence and the number that were placed in the drop boxes in the veterinary offices were not accounted for. This would have been very helpful for future research in this area so that researchers could have a rough estimate of which method is most effective in terms of participation.

### **Future Research**

In the future, research in this area could be conducted in both large, small, and mixed animal medicine in order to determine if there is not only a difference in the way in which various veterinarians communicate with their clients, but also to determine if there is a difference in the communication behaviors that various clients expect from their veterinarians. Extensive research in human health has also explored end of life communication between physicians, patients, and family members. Research in veterinary medicine could also explore end of life communication and examine communication behaviors that veterinarians employ when discussing a pet's death with clients. Lastly, while some research has been conducted in veterinary medicine that examines communication education in veterinary medical school, it would be interesting to examine this area more in depth in order to determine the extent to which communication behaviors are taught.

## References

- Ammentorp, J., Mainz, J., & Sabroe, S. (2006). Determinants of priorities and satisfaction in pediatric care. *Pediatric Nursing*, 32(4), 333-348.
- Antelyes, J. (1990). Client hopes, client expectations. *Journal of The American Veterinary Medical Association*, 197(12), 1596-1597.
- Babrow, A. S., Hines, S.C., & Kasch, C.R. (2000). Managing uncertainty in illness explanation: An application of problematic integration theory. In B. Whaley (Ed.), *Explaining illness: Research, theory, and strategies* (41-67). Hillsdale, NJ: Lawrence Erlbaum.
- Beckman, H. B., & Frankel, R. M. (1984). The effect of physician behavior on the collection of data. *The Annals of Medicine*, 101(5), 692-696.
- Bethel, C., Peck, C., & Schor, E. (2001). Assessing health system provision of well-child care: The promoting healthy development survey. *Pediatrics*, 107, 1084-1093.
- Bonvicini, K. & Keller, V. F. (2006). Academic faculty development: The art and practice of effective communication in veterinary medicine. *Journal of Veterinary Medical Education* 33(1), 50-57.
- Brandt, J. C. & Bateman, S.W. (2006). Senior veterinary students' perceptions of using role play to learn communication skills. *Journal of Veterinary Medical Education*, 33(1), 76-80.
- Brashers, D., Neidig, J., Haas, S., Dobbs, L., Cardillo, L., & Russell, J. (2000). Communication in the management of uncertainty: The case of persons living with HIV and AIDS. *Communication Monographs*, 67(1), 63-84.
- Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.

- Brown, J. P. & Silverman, J. (1999). The current and future market for veterinarians and veterinary medical services in the United States. *Journal of the American Veterinary Medical Association*, 215, 161-183.
- Cegala, D. J., Coleman, M. T., & Turner, J. W. (1998). The development and partial assessment of the medical communication competence scale. *Health Communication*, 10, 261–288.
- Cegala, D. J., Gade, C., Broz, S., & McClure, L. (2004). Physician's and patients' perceptions of patients' communication competence in a primary care medical interview. *Health Communication*, 16(3), 289-304.
- Cegala D. J., Marinelli T., & Post D. (2000). The effects of patient communication skills training on compliance. *Archives of Family Medicine*, 9(1), 57-64.
- Cerda, J., Rodriguez, M., Corral, O., Lorenzo, S., & Danet, A. (2010). Quality of internal communication in health care and the professional-patient relationship. *The Health Care Manager*, 29(2), 179-185.
- Coe, J. B., Adams, C. L., & Bonnett, B. N. (2007). A focus group study of veterinarians' and pet owners' perceptions of the monetary aspects of veterinary care. *Journal of the American Veterinary Medical Association*, 231(10), 1510-1518.
- Cohen, G. (1996). Age and health status in a patient satisfaction survey. *Social Science & Medicine* (1982), 42(7), 1085-1093.
- Cohen, S. P. (2002). Can pets function as family members? *Western Journal of Nursing Research*, 24, 621–633.
- Conigliaro, R. L. (2007). Doctors talking with patients/patients talking with doctors: Improving communication in medical visits. *JAMA: Journal Of The American Medical Association*, 297(7), 750-751.



- Davis, J., Foley, A., Crigger, N., & Brannigan, M. (2008). Healthcare and listening: A relationship for caring. *The International Journal of Listening*, 22, 168-175.
- Dick, R., Parry, C., & Tamura, G. (2008) Parental responses to involvement in rounds on a pediatric unit at a teaching hospital: A qualitative study. *Academic Medicine*, 88(3), 292-297.
- Dutta-Bergman, M. J. (2005). The relation between health-orientation, provider-patient communication, and satisfaction: An individual-difference approach. *Health Communication*, 18(3), 291-303.
- Epstein, R. M. (2003). Mindful practice in action: Technical competence, evidence based medicine, relationship-centered care. *Family System Health*, 21, 1-9.
- Fisher, M. & Broome, M. (2009). Parent-provider communication during hospitalization. *Journal of Pediatric Nursing*, 26(1), 58-69.
- Frankel, R.M. (2006). Pets, vets, and frets: What relationship-centered care research has to offer veterinary medicine. *Journal of Veterinary Medical Education*, 33(1), 20-27.
- Gordon, G., Joos, S., & Byrne, J. (2000). Physician expressions of uncertainty during patient encounters. *Patient Education and Counseling* 40, 59-65.
- Grave, K., & Tanem, H. (1999). Compliance with short-term oral antibacterial drug treatment in dogs. *Journal of Small Animal Practitioners*, 40, 158-162.
- Hafen, J., Rush, B. R., Reisbig, A.J., McDaniel, K. Z., & White, M. B. (2007). The role of family therapists in veterinary medicine: Opportunities for clinical services, education, and research. *Journal of Marital & Family Therapy*, 33(2), 165-176.
- Haight, M. (2009, June 22). *\$45.4 billion spent on pets: Where's the money going?*. Retrieved from <http://www.dancingdogblog.com/2009/06/454-billion-spent-on-pets-top-5->

- categories-8-basic-annual-costs/Hannah, H. W. (2001, July). Communications, privilege, and the client. *Journal of American Veterinary Medical Association* 219(1), 32.
- Hall, J. A., & Dorman, M. C. (1988). Meta-analysis of satisfaction with medical care: Description of research domain and analysis of overall satisfaction levels. *Social Science and Medicine* 27, 637-644.
- Hart, C., Kelleher, K. J., Drotar, D., & Scholle, S. (2007). Parent-provider communication and parental satisfaction with care of children with psychosocial problems. *Patient Education & Counseling*, 68(2), 179-185.
- Haskard, K. B., William, S. I., DiMatteo, M. R., Rosenthal, R., White, M. K., & Goldstein, M. G. (2008). Physician and patient communication training in primary care: effects on participation and satisfaction. *Health Psychology*, 27(5), 513-522.
- Hinkle, D. E., Wiersma, W., & Jurs, S. G. (2003). *Applied statistics for the behavioral sciences*. (5<sup>th</sup> ed., pp. 485-486). Boston, MA: Houghton Mifflin Company.
- Hirsch, A. T., Atchinson, J. W., Berger, J. J., Waxenberg, L. B., Lafayette-Lucey, A., Bulcourf, B. B., & Robinson, M. (2005). Patient satisfaction with treatment for chronic pain: Predictors and relationship to compliance. *Clinical Journal of Pain*, 21, 302-310.
- Humble, J. A. (1996). Improving listening skills of food animal practitioners. *Journal of the American Veterinary Medical Association*, 209(6), 1067-1068.
- Institute of Medicine. (2001a). Crossing the quality chasm: A new health system from the 21<sup>st</sup> century. Washington, D. C: National Academy Press.
- Institute of Medicine. (2001b). Envisioning the national health care quality report. Retrieved February 15, 2012, from: [https://download.nap.edu/catalog.php?record\\_id=10073](https://download.nap.edu/catalog.php?record_id=10073)

- Kachigan, S. (1991). *Multivariate statistical analysis: A conceptual introduction*. (2<sup>nd</sup> ed., pp. 153), New York, NY: Radius Press.
- Kaplan, S., Greenfield, S., Gandek, B., Rogers, W., & Ware, J. (1996) Characteristics of physicians with participatory decision-making styles. *Annals of Internal Medicine*, 124(5), 497-504
- Kilbourne, A. M., Switzer, G., Hyman, K., Crowley-Matoka, M., & Fine, M. J. (2006). Advancing health disparities research within the health care system: A conceptual framework. *American Journal Of Public Health*, 96(12), 2113-2121.
- Kim, S. S., Kaplowitz, S., & Johnston, M. V. (2004). The effects of physician empathy on patients satisfaction and compliance. *Evaluation & The Health Professions*, 27(3), 237-251.
- Kinnersley, P., Stott N., Peters, T., & Harvey, L. (2000). The patient-centeredness of consultations and outcome in primary care. *British Journal of General Practice* 49, 711-716.
- Kogan, L., Butler, C., Lagoni, L., Brannan, J., McConnell, S., & Harvey, A. (February 15, 2004). Training in client relations and communication skills in veterinary medical curricula and usage after graduation. *Journal American Veterinary Medical Association*, 224(4), 504-507.
- Korsch, B. M., Gozzi, E. K., & Francis, V. (1968). Gaps in doctor-patient communication. *Pediatrics* 42(5), 855-871.
- Koshti-Richman, A. (2008). Listening to parents and carers of children with disabilities. *Paediatric Nursing* 20(7), 43-44.

- Kratz, L., Uding, N., Trahms, C. M., Villareale, N., & Kieckhefer, G. M. (2009). Managing childhood chronic illness: Parent perspectives and implications for parent-provider relationships. *Families, Systems & Health: The Journal Of Collaborative Family Healthcare*, 27(4), 303-313.
- Kuehn, B. M. (2012). Patient-Centered Care Model Demands Better Physician-Patient Communication. *JAMA: Journal Of The American Medical Association*, 307(5), 441-442.
- Kupst, M. J., Dresser, K., Schulman, J.L., & Paul, M.H. (April 1975). Evaluation of methods to improve communication in the physician-patient relationship. *American Journal of Orthopsychiatry* 45(3), 420-429.
- Kurtz, S. (2006). Teaching and learning communication in veterinary medicine. *Journal of Veterinary Medical Education*, 33(1), 11-18.
- Larson, E. & Yao, X. (2005). Clinical empathy as emotional labor in the patient-physician relationship. *Journal of the American Medical Association*, 293(9), 1100-1106.
- Latta, L., Dick, R., Parry, C., & G. (2008). Parental responses to involvement in rounds on a pediatric inpatient unit at a teaching hospital: A qualitative study. *Academic Medicine*, 83(3), 292-297.
- Li, H., Desroches, N. G., Yum, Y., Koehn, C., & Deagle, G. (2007). Asymmetrical talk between physicians and patients: A quantitative discourse analysis. *Canadian Journal of Communication*, 32(3), 417-433.
- Lipkin Jr., M., Frankel, R., Beckman, H., Charon, R. & Fein, O. (1995). Performing the Interview. In M. Lipkin, Jr., S. M. Putnam, & A. Lazare (Eds.), *The medical interview: Clinical care, education and research* (pp. 65–82). Springer-Verlag: New York, NY.

- Little, P., Everitt, H., Williamson, I., Warner, G., Moore, M., Gould, C., & Payne, S. (2001). Preferences of patients for patient centered approach to consultation in primary care: observational study. *BMJ: British Medical Journal (International Edition)*, 322(7284), 468.
- Magrath, C. (2006). A conceptual framework for facilitator training to expand communication-skills training among veterinary practitioners. *Journal of Veterinary Medical Education* 33(1), 108-110.
- Martin, E. A. (2006). Managing client communication for effective practice: What skills should veterinary graduates have acquired for success? *Journal of Veterinary Medical Education*, 33(1), 45-49.
- Mellanby, R., Crisp, J., De Palma, G., Spratt, Urwin, D., Wright, M., & Zago, S., (2007). Perceptions of veterinarians and clients to expressions of clinical uncertainty. *The Journal of Small Animal Practice*, 48(1), 26-31.
- Nicolai, J., Demmel, R., & Farsch, K. (2010). Effects of mode of presentation on ratings of empathic communication in medical interviews. *Patient Education And Counseling*, 80(1), 76-79.
- Nobile, C. & Drotar, D. (2003). Research on the quality of parent provider communication in pediatric care: Implications and recommendations. *Journal of Developmental & Behavioral Pediatrics*, 24(4), 279-290.
- Norton, R. (1983). *Communication style: Theory, application, and measures*. Beverly Hills, CA: Sage.

- Nunes, C., & Ayala, M. (2010). Communication techniques used by pediatricians during well-child program visits: A pilot study. *Patient Education and Counseling*, 78(1), 79-84.
- Orbuch, T. L., Parry, C., Chesler, M., Fritz, J., & Repetto, P. (2005). Parent-child relationships and quality of life: Resilience among childhood cancer survivors. *Family Relations*, 54(2), 171-183.
- Osborne, C. A. (2008, July). Understanding: A vital component of effective patient care. *DVM: The Newsmagazine of Veterinary Medicine*.
- Osborne, C. A., & Ulrich, L. K. (2008, May). Lessons on listening. *DVM: The Newsmagazine of Veterinary Medicine*, 39(5), 10S-14S.
- Pearson, J. C., & Nelson, P. E. (1991). *Understanding and sharing*. (5<sup>th</sup> ed). Dubuque, IA: Wm. C. Brown.
- Planchon, L. A., Templer, D. I., Stokes, S., & Keller, J. (2002). Death of a companion cat or dog and human bereavement: Psychosocial variables. *Society & Animals*, 10(1), 93-105.
- Robinson, J. H., Callister, L. C., Berry, J. A., & Dearing, K. A. (2008). Patient-centered care and adherence: Definitions and applications to improve outcomes. *Journal of the American Academy of Nurse Practitioners*, 20, 600-607.
- Rider, E. A., Volkan, K., & Hafler, J. P. (2008). Pediatric residents' perceptions of communication competencies: Implications for teaching. *Medical Teacher*, 30, 208e-217e.
- Rochon, D., Buck, D., Mahata, K., & Turley, J. (2006). The evolution of goal-negotiated care. HIC 2006 and HINZ 2006: Proceedings. Brunswick East, Vic.: Health Informatics Society of Australia, 90-96.

- Rochon, D., Ross, M. W., Looney, C., Nepal, V. P., Price, A. J., & Giordano, T. P. (2011). Communication Strategies to Improve HIV Treatment Adherence. *Health Communication, 26*(5), 461-467.
- Roter, D. L. (2000). The enduring and evolving nature of the patient-physician relationship. *Patient Education Counseling, 39*, 5–15.
- Russell, R. L. (Fall 1994). Preparing veterinary students with the interactive skills to effectively work with clients and staff. *Journal of Veterinary Medical Education, 21*(2), 40-43.
- Schiavo, R. (2007). *Health communication: From theory to practice*. (Ch. 2). San Francisco: Jossey-Bass.
- Schuster, M., Duan, N., Regalado, M., & Klein, D. (2000). Anticipatory guidance: What information do parents receive? What information do they want? *Archives of Pediatric Adolescent Medicine, 154*, 1191-1198.
- Shaw, J. R., Adams, C. L., & Bonnett, B. N. (2004a). What can veterinarians learn from studies of physician-patient communication about veterinarian-client-patient communication? *Journal of the American Veterinary Medical Association, 224*(5), 676-684.
- Shaw, J. R., Adams, C. L., Bonnett, B. N., Larson, S., & Roter, D. L. (2004b). Use of the Roter interaction analysis system to analyze veterinarian-client-patient communication in companion animal practice. *Journal of American Veterinary Medical Association 225*, 222-229.
- Shaw, J. R., Bonnett, B. N., Adams, C. L., & Roter, D. L. (2006). Veterinarian-client-patient communication patterns used during clinical appointments in companion animal practice. *Journal of the American Veterinary Medical Association, 228*(5), 714-721.

- Shaw, J. R. , Bonnett, B. N., Adams, C. L., Larson, S., & Roter, D. L. (2008). Veterinarian-client-patient communication during wellness appointments versus appointments related to a health problem in companion animals. *Journal of the American Veterinary Association* 233(10), 1576-1587.
- Sparks, L., Villagran, M. M., Parker-Raley, J., & Cunningham, C. B. (2007). A patient-centered approach to breaking bad news: Communication guidelines for health care providers. *Journal of Applied Communication Research*, 35(2), 177-196.
- Stewart, M., Brown, J., Donner, A., McWhinney, I. R., Oates, J., Weston, W., & Jordan, J. (2000). The impact of patient-centered care on outcomes. *Journal Of Family Practice*, 49(9), 796-804.
- Strand, E. B. (2006). Enhanced communication by developing a non-anxious presence: A key attribute for the successful veterinarian. *Journal of Veterinary Medical Education*, 33(1), 65-70.
- Street, R. L., & Millay, B. (2001). Analyzing patient participation in medical encounters. *Health Communication*, 13(1), 61-73.
- Tates, K. & Meeuwesen, L. (2001). Doctor-parent-child communication: A review of the literature. *Social Science and Medicine*, 52(2001), 839-851.
- Thompson, T. L. & Parrott, R. (2002). Interpersonal communication and health care. In M. L. Knapp & J. A. Daly (Eds.), *Handbook of interpersonal communication* (3rd ed., pp. 680–725). Thousand Oaks, Calif.: Sage Publications, Inc.
- Tsan-Kuo, C., Shoemaker, P. J., & Brendlinger, N. (1987). Determinants of International News Coverage in the U.S. Media. *Communication Research*, 14(4), 396.



- Wagner, P., Lentz, L., & Heslop, S. (2002). Teaching communication skills: A skills-based approach. *Academic Medicine: Journal Of The Association Of American Medical Colleges*, 77(11), 1164.
- Wanzer, M. B., Booth-Butterfield, M., & Gruber, K. (2004). Perceptions of health care providers' communication: Relationships between patient-centered communication and satisfaction. *Health Communication*, 16(3), 363-384.
- Wimmer, R. D., & Dominick, J. R. (2006). *Mass media research: An introduction*. (8 ed., pp. 382-383). Boston, MA: Wadsworth.

## APPENDIX A- CLIENT SURVEY

**Instructions:** Please read the following survey and complete the questions provided. This survey is part of a study to examine the communication practices of veterinarians during veterinary medical encounters.

### Medical Interview

1. Below is a list of possible communication behaviors that your veterinarian may have engaged in today during your medical encounter. Please circle all that you observed.
  - a. Maintained direct eye contact
  - b. Provided a Detailed Explanation of what was wrong
  - c. Engage in Friendly Behavior
  - d. Listened Carefully
  - e. Used Humor
  - f. Used a pleasant tone of voice
  - g. Other: Please Identify\_\_\_\_\_
2. In the previous question, you were asked to identify communication behaviors you're your veterinarian may have engaged in during your visit. Here we would like you to identify the THREE communication behaviors that you feel are most important when visiting your veterinarian. Note: *Your vet may or may not have engaged in this behavior.*
  1. \_\_\_\_\_ (most important)
  2. \_\_\_\_\_
  3. \_\_\_\_\_ (least important)
3. Did your veterinarian use any of the following communication tools?
  - a. Power Point
  - b. Website
  - c. Demonstration (e.g. Show you how to apply medicine)
  - d. A Computer Animation
  - e. Brochures
  - f. Other\_\_\_\_\_

**When answering the following items, please indicate your level of agreement by circling the response that comes closest to what you believe.**

### Relationship-Centered Care

4. During the visit, I felt I had my veterinarian's full attention
  - a. Strongly disagree
  - b. Disagree
  - c. Neutral
  - d. Agree
  - e. Strongly Agree
5. I was encouraged to ask my veterinarian questions about my pet's health
  - a. Strongly disagree
  - b. Disagree
  - c. Neutral

- d. Agree
  - e. Strongly Agree
6. I frequently ask my veterinarian specific questions about my pet's health
- a. Strongly disagree
  - b. Disagree
  - c. Neutral
  - d. Agree
  - e. Strongly Agree
7. My veterinarian and I worked together to manage my pet's health.
- a. Strongly disagree
  - b. Disagree
  - c. Neutral
  - d. Agree
  - e. Strongly Agree
8. I discuss all possible treatment options for my pet with my veterinarian before deciding which treatment to choose
- a. Strongly disagree
  - b. Disagree
  - c. Neutral
  - d. Agree
  - e. Strongly Agree
9. My veterinarian used medical jargon during my pet's examination.
- a. Strongly disagree
  - b. Disagree
  - c. Neutral
  - d. Agree
  - e. Strongly Agree
10. My veterinarian explained the procedures/ examination so that I fully understood
- a. Strongly disagree
  - b. Disagree
  - c. Neutral
  - d. Agree
  - e. Strongly Agree

**Patient Satisfaction**

11. I feel that my veterinarian spent an adequate amount of time examining my pet.
- a. Strongly disagree
  - b. Disagree
  - c. Neutral
  - d. Agree
  - e. Strongly Agree

12. My veterinarian is knowledgeable veterinary medicine.
  - a. Strongly disagree
  - b. Disagree
  - c. Neutral
  - d. Agree
  - e. Strongly Agree
13. My veterinarian provides me with practical information about my pet's health
  - a. Strongly disagree
  - b. Disagree
  - c. Neutral
  - d. Agree
  - e. Strongly Agree
14. Overall, I found the office staff to be and helpful.
  - a. Strongly disagree
  - b. Disagree
  - c. Neutral
  - d. Agree
  - e. Strongly Agree
15. Overall, my veterinarian engaged in good communication with me during our visit.
  - a. Strongly disagree
  - b. Disagree
  - c. Neutral
  - d. Agree
  - e. Strongly Agree
16. I would recommend my veterinarian to someone else.
  - a. Strongly disagree
  - b. Disagree
  - c. Neutral
  - d. Agree
  - e. Strongly Agree
17. Please rate your overall experience with your veterinary visit.
  - 1 Very Poor
  - 2 Poor
  - 3 Neutral
  - 4 Good
  - 5 Very Good

### **Demographics**

18. Approximately how long did you have to wait to see the veterinarian?
  - a. 0-10 minutes
  - b. 11-20 minutes

- c. 21-30
  - d. 31+ minutes
19. Did you have a scheduled appointment?
- a. Yes
  - b. No
20. How long have you been visiting your veterinarian?
- a. 0-5 years
  - b. 6-10 years
  - c. 11+ years
21. If you visit a practice where several veterinarians are employed, do you routinely see the same veterinarian?
- a. Yes
  - b. No
22. What type of pet was treated today?
- a. Dog
  - b. Cat
  - c. Other: Please Identify \_\_\_\_\_
23. What is your reason for visiting today?
- a. Check-up
  - b. Follow-up visit
  - c. Emergency
  - d. Chronic Illness
  - e. Other: Please explain \_\_\_\_\_
24. How did you select your veterinarian?
- a. Word of mouth/
  - b. Friend's recommendation
  - c. Online search/website
  - d. Telephone Book
  - e. Advertisement
  - f. Other: \_\_\_\_\_(please explain)
25. Please select your gender.
- a. Male
  - b. Female
  - c. Rather not say
26. Please select your age.
- a. 18 & under
  - b. 19-29
  - c. 30-39
  - d. 40-49

- e. 50-59
  - f. 60-69
  - g. 70+
27. Please select ethnicity.
- a. White
  - b. American Indian or Alaskan Native
  - c. Hispanic
  - d. African American
  - e. Pacific Islander or Native Hawaiian
  - f. Asian
  - g. Other
  - h. Rather not specify

**If you have completed the survey in your veterinarian's office, please place it in the provided envelope, seal it, and place the contents in the box at the front desk. If you have completed the survey outside of the veterinary office, please use the provided stamped envelope and mail it to the researcher. Thank you for your participation!**